



सत्यमेव जयते

SANKET

Statistical Analysis & Numbers:
Key Evaluation of Trends in Non-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



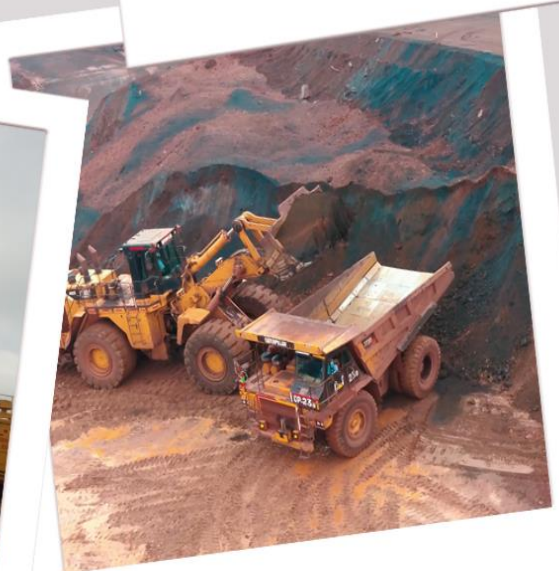
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PREFACE

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 Non-Coal Mine Accidents 2016 – 2022** disseminates information regarding accidents in non - 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 non - coal mines since 1901 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 non-coal mine accidents during last 10 years (2013 to 2022) is covered in chapter 2. Yearly details of non-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 ।

March, 2025

Dhanbad

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MESSAGE

The Directorate General of Mines Safety (DGMS) in India, a sub-ordinate office under the Ministry of Labour and Employment, is entrusted to administer the Mines Act of 1952. The DGMS's key role includes formulating and enforcing safety standards, conducting thorough mine inspections, and fostering a strong safety culture throughout the nation's mining industry.

This publication, titled "SANKET: Statistical Analysis & Numbers—Key Evaluation of Trends in Non-Coal Mine Accidents," provides a comprehensive analysis of accident statistics from 2016 to 2022 in the non-coal mines. The data presented offers valuable insights into accident patterns and contributing risk factors. This data-driven approach is central to the DGMS's commitment to proactive safety measures and informed decision-making.

The publication not only emphasise the DGMS's dedication to transparency but also highlights the collaborative efforts between the DGMS and key stakeholders in the collective pursuit of safer working conditions. The ultimate goal "Vision Zero" is to move towards a future with significantly minimized mining accidents and occupational diseases. The DGMS welcomes feedback for further improvements to this vital resource.

March, 2025

(Ujjwal Tah)

Dhanbad

Director General

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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 Non-Coal Mine Accidents," (2016-2022) नाम से 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 पूर्ण जिम्मेवारी है। यह महानिदेशालय कोयला खान विनियम 1957, धातु खान विनियम 1961, एवं तेल खान विनियम 2017 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 अंतर्गत आने वाले भारत के सभी गैर-कोयला खानों को समाविष्ट करता है।

यह प्रकाशन खास तौर पर गैर-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 गैर-कोयला के खानों में घटित विभिन्न दुर्घटनाओं के लिए गठित जाँच – न्यायालयों की अद्यतन सूची को भी शामिल किया गया है।

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

पाठकों से सुझाव प्राप्त हो तो उसका हार्दिक स्वागत किया जायेगा।

मार्च, 2025
धनबाद।

(ज्योति प्रसाद आर्य)
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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 3. Sitarampur Region No.III 4. Guwahati |
| 2 | Central Zone, Dhanbad, Jharkhand | 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 2017, Metalliferous Mines Regulations 1961 and Oil Mines Regulations 2017. 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 any 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 non-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, mineral 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 mineral 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 non-coal mines since 1901 .

2. DECADAL ANALYSIS (2013 TO 2022)

Fatal Accidents

- The highest number of fatal accidents occurred in 2013 (58 accidents), with a corresponding total of 74 fatalities.
- The number of fatal accidents generally decreased over the years, with a noticeable decline in recent years (2019-2021).
- There was a slight increase in both fatal accidents and fatalities in 2022 compared to 2021. However, it remained at lower level as compared to earlier periods (2013 – 2019).
- 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 | 58 | 74 | 1.28 |
| 2014 | 39 | 45 | 1.15 |
| 2015 | 45 | 48 | 1.07 |
| 2016 | 39 | 50 | 1.28 |
| 2017 | 42 | 63 | 1.50 |
| 2018 | 45 | 51 | 1.13 |
| 2019 | 45 | 54 | 1.20 |
| 2020 | 40 | 50 | 1.25 |
| 2021 | 33 | 50 | 1.52 |
| 2022 | 40 | 54 | 1.35 |

- The average number of fatalities per fatal accident, a measure of accident severity, ranged from 1.07 to 1.52 over the analysed period. This suggests that the severity of accidents remained relatively consistent, although there was a notable increase in 2017 and 2021.
- 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 non-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: 426

Mean Fatal Accidents per Year: 42.6

Total Fatalities: 539

Mean Fatalities per Year: 53.9

Serious Accidents

- The highest number of serious accidents as well as seriously injured persons occurred in 2019 with 58 serious accidents and 70 seriously injured persons.
- There is a general fluctuating trend in both serious accidents and seriously injured cases
- Year 2017 had the lowest number of serious accidents and year 2020 had the lowest number of seriously injured cases.
- The control over serious injuries 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 | 52 | 68 | 1.31 |
| 2014 | 44 | 60 | 1.36 |
| 2015 | 35 | 51 | 1.46 |
| 2016 | 37 | 48 | 1.30 |
| 2017 | 22 | 39 | 1.77 |
| 2018 | 26 | 38 | 1.46 |
| 2019 | 58 | 70 | 1.21 |
| 2020 | 24 | 33 | 1.38 |
| 2021 | 45 | 52 | 1.16 |
| 2022 | 48 | 65 | 1.35 |

- The metric of seriously injured cases per serious accident varies between 1.16 and 1.77 over the years.
- 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 2017, may require specific attention to reduce the severity of injuries per accident.
- The analysis of serious accidents and seriously injured cases in non-coal mines reveals an overall fluctuating trend close to fatal accident numbers, indicating progress in safety management efforts and further in-depth analysis. 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: 391

Mean Serious Accidents per Year: 39.1

Total Seriously Injured Cases: 524

Mean Seriously Injured Cases per Year: 52.4

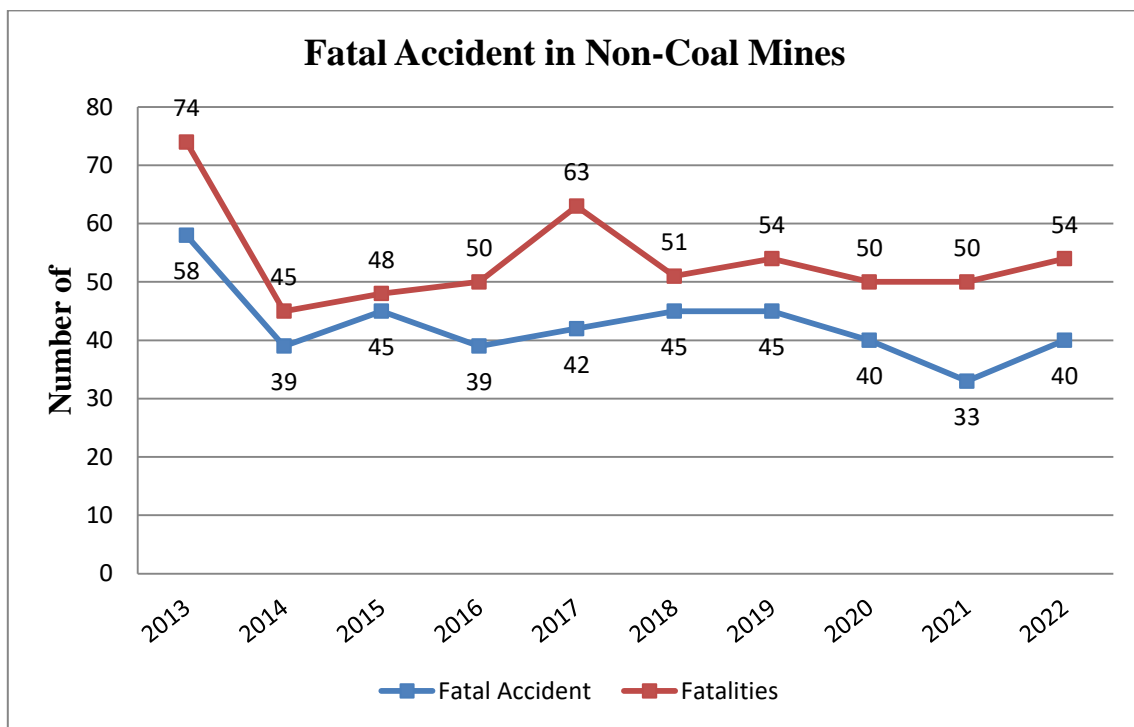


Figure 2.1

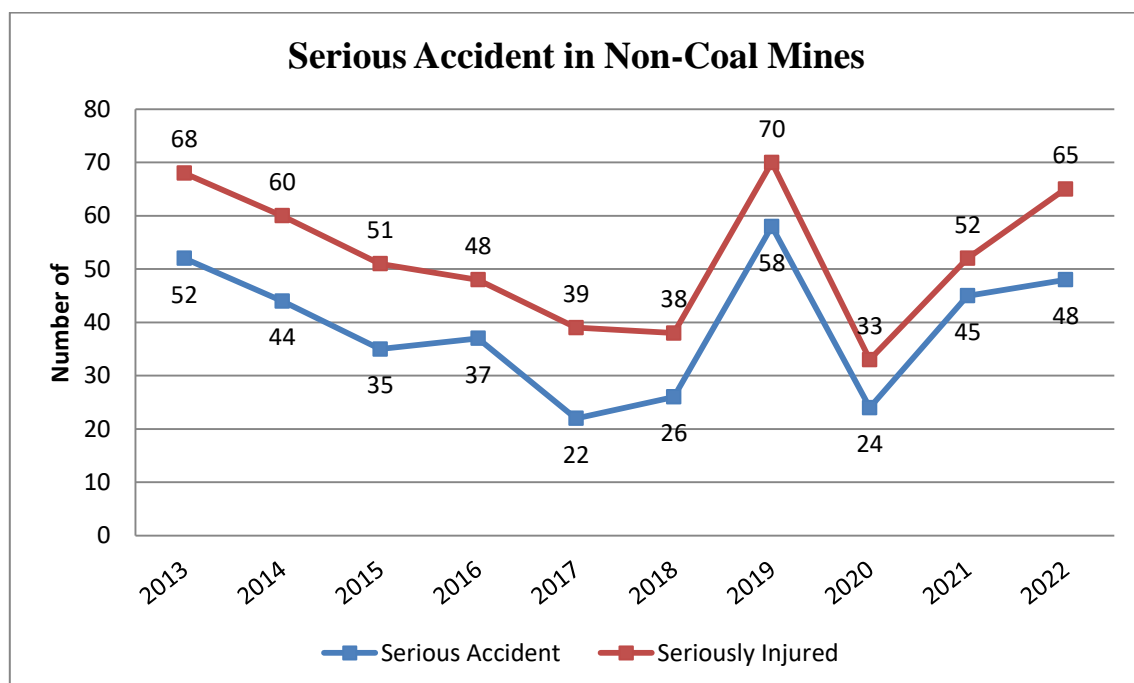


Figure 2.2

Place Wise and Cause Wise Fatal Accident

- Opencast accidents have consistently been the highest in numbers among the three locations.
- Above Ground accidents fluctuate but generally remain second-highest in numbers.
- Below 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 and most number of metal mines operate as opencast and aboveground.
- 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 | 43 | 10% |
| Opencast | 297 | 70% |
| Above Ground | 86 | 20% |

- 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 Above Ground and Below Ground. Strengthening safety measures in opencast mining and maintaining vigilance in mining are essential for overall mine safety.

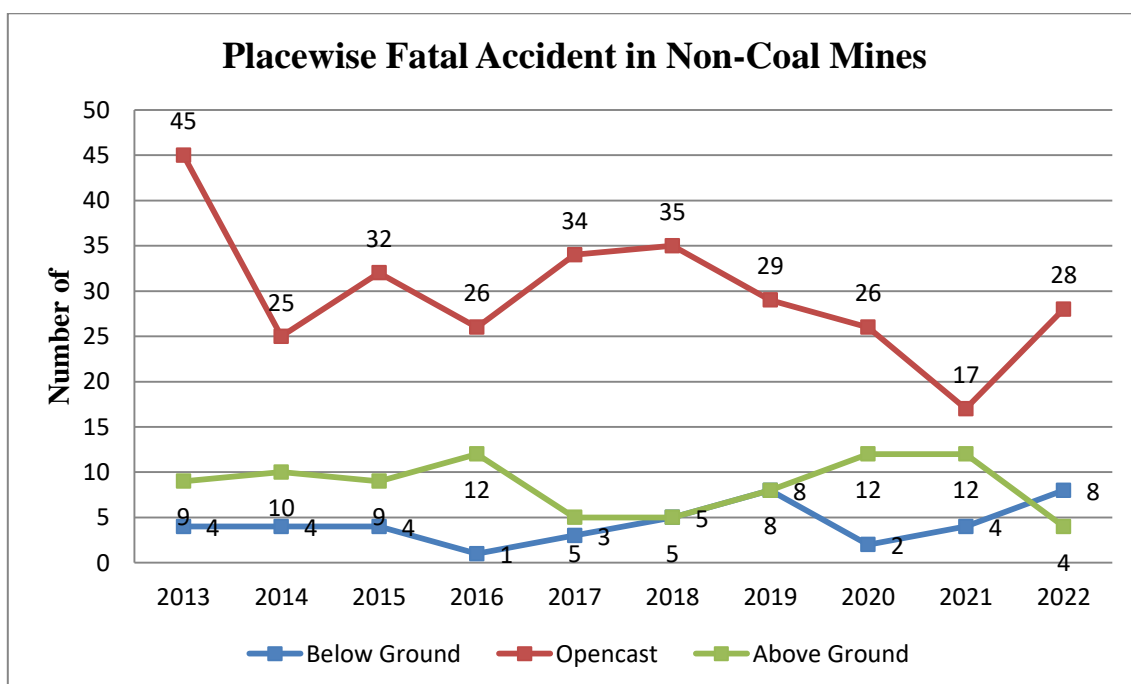


Figure 2.3

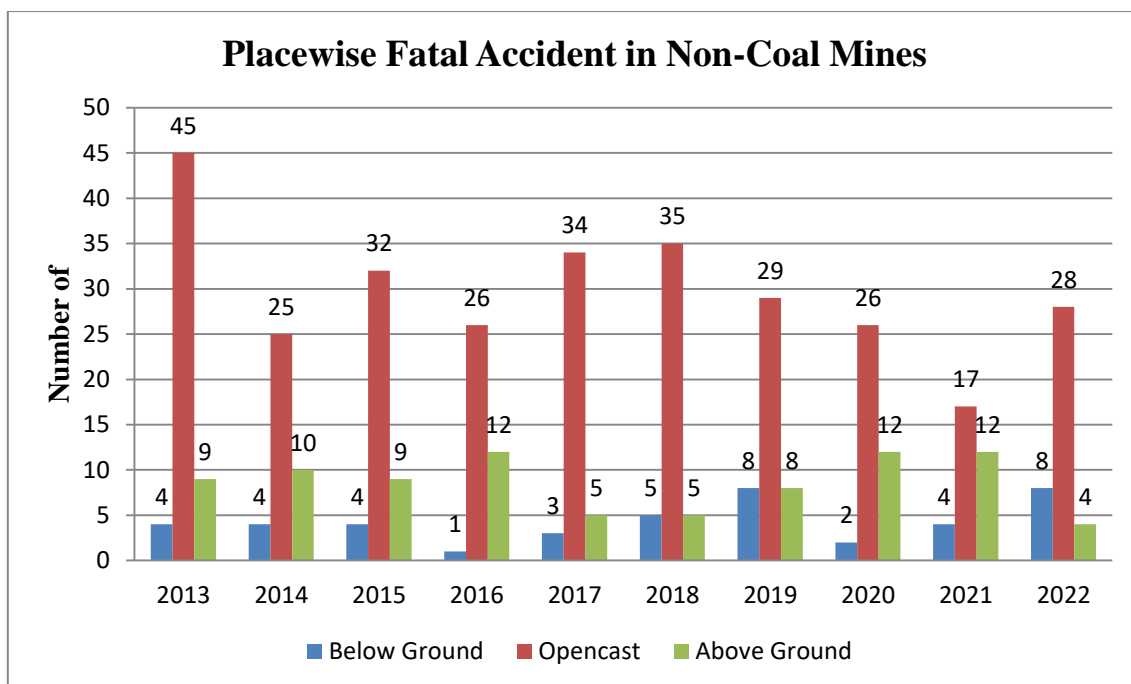


Figure 2.4

- "Fall (other than fall of ground)" caused the highest number of fatal accidents.
- "Ground Movement" and "Transportation Machinery (other than winding shaft)" also contributed significantly to fatal accidents.
- Accidents caused by "Explosives", "Electricity", "Machinery other than transportation machinery," and "Other Causes" vary across the years.

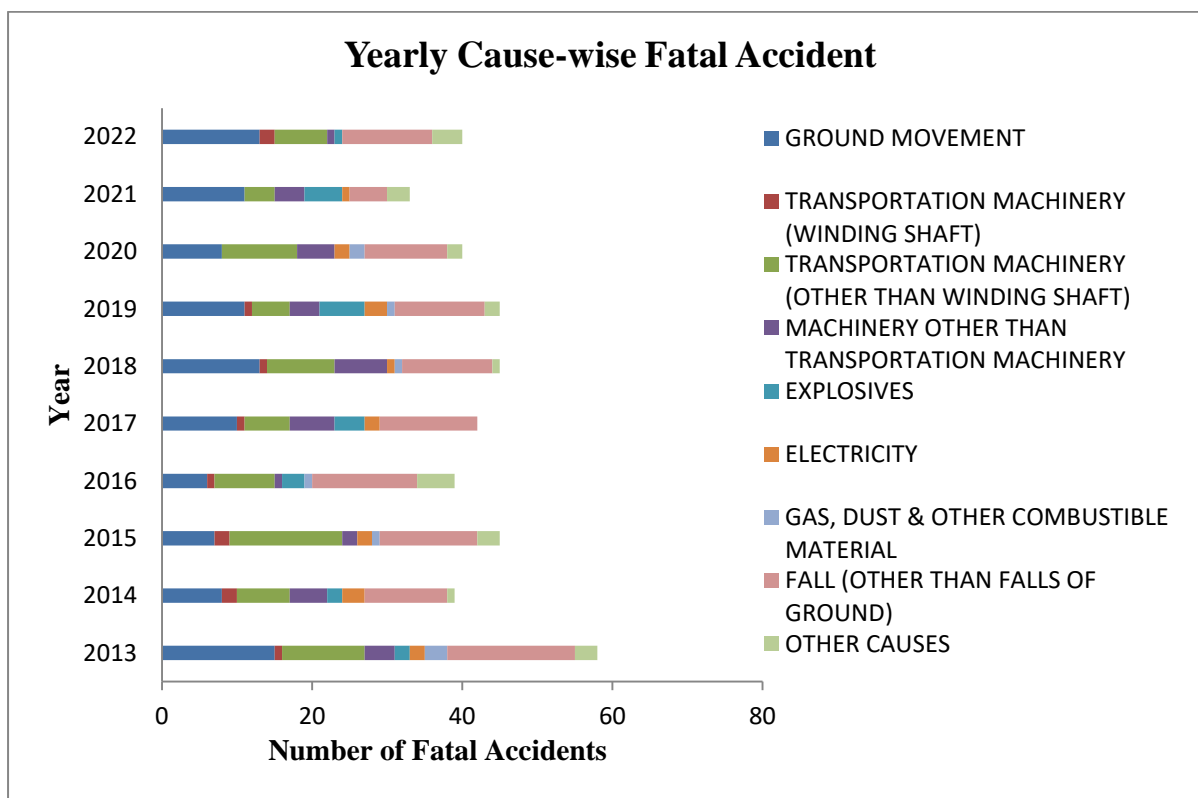
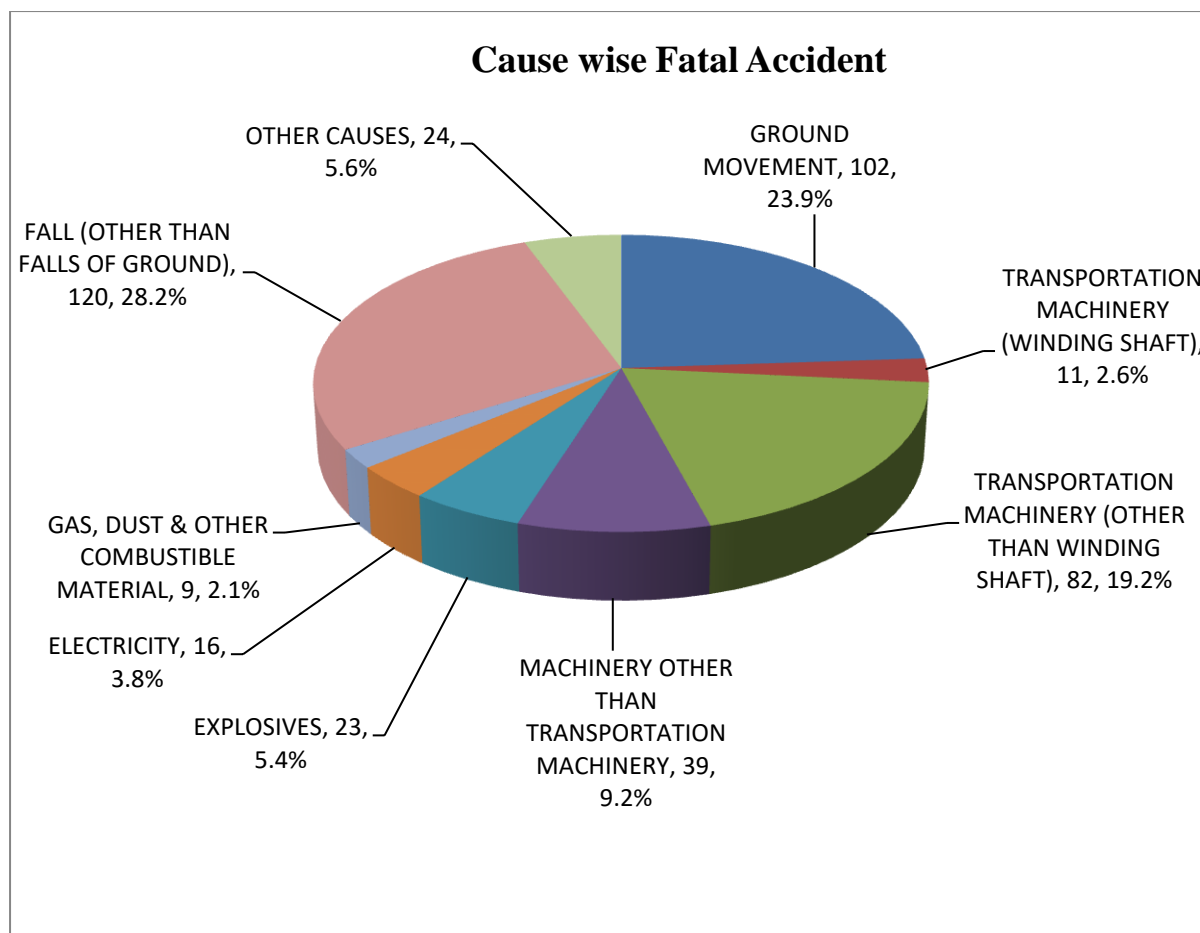


Figure 2.5

**Figure 2.6**

Place Wise and Cause Wise Serious Accident

- "Above Ground" consistently experiences the highest number of serious accidents. "Below Ground" and "Opencast" locations have comparatively lower serious accident numbers.
- Total Serious Accidents by location:

Table 2.4

| Place | Total Serious Accident | Percentage |
|--------------|------------------------|------------|
| Below Ground | 100 | 26% |
| Opencast | 76 | 19% |
| Above Ground | 215 | 55% |

- The exploratory analysis of serious accidents in non-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.

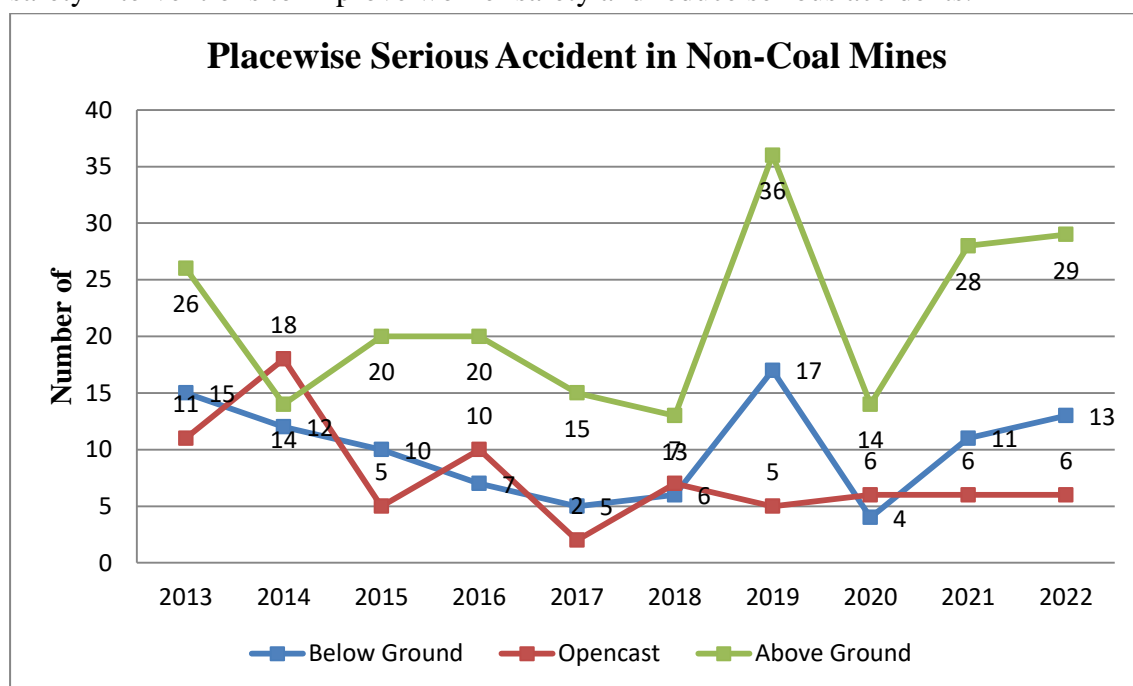


Figure 2.7

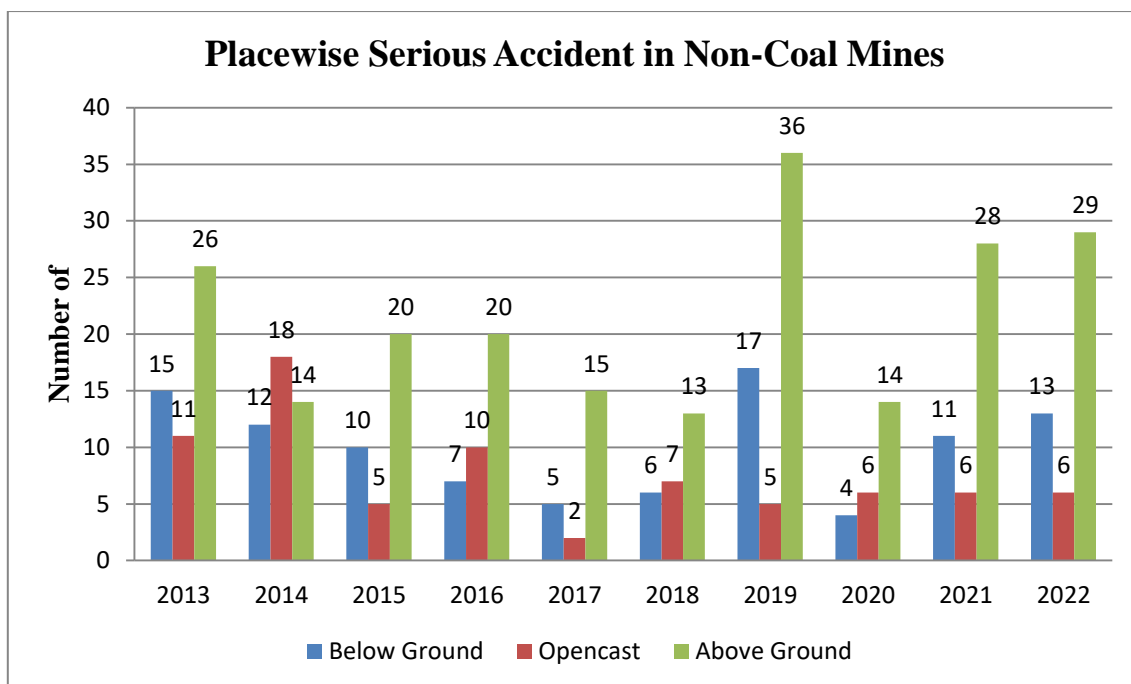


Figure 2.8

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

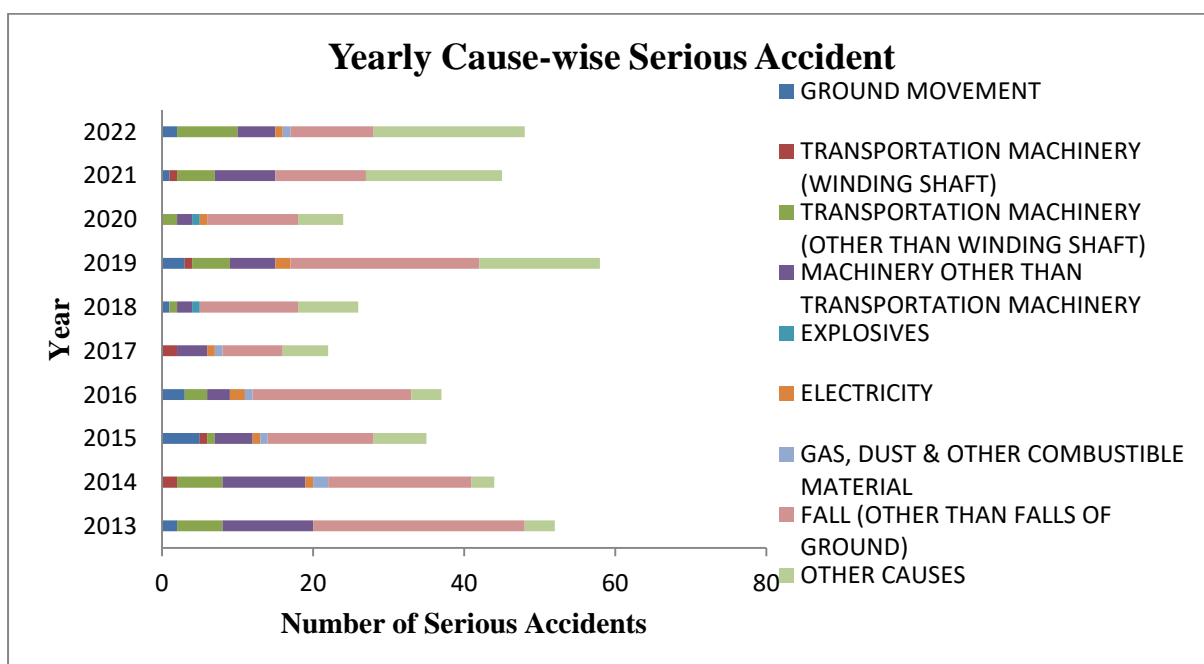
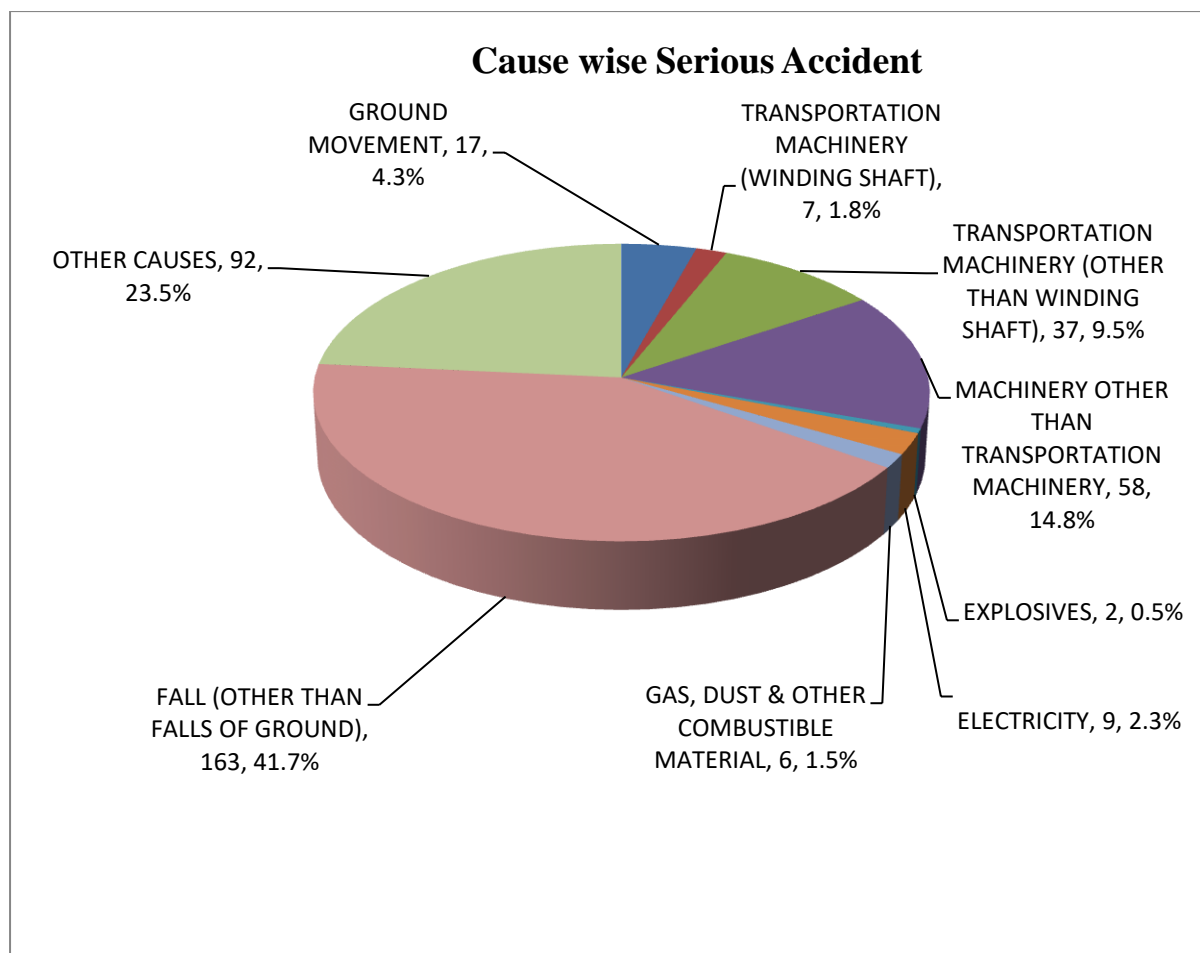


Figure 2.9

**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 | Koderma Region | KDR |
| Eastern Zone | EZ | Sitarampur Region 1 | SR1 |
| | | Sitarampur Region 2 | SR2 |
| | | Sitarampur Region 3 | SR3 |
| | | Guwahati | GUR |
| 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 |
| | | Gwalior Region | GWR |
| South Central Zone | SCZ | Hyderabad Region 1 | HR1 |
| | | Hyderabad Region 2 | HR2 |
| South Eastern Zone | SEZ | Bhubaneswar 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 |

Zone and Region Wise Fatal Accidents

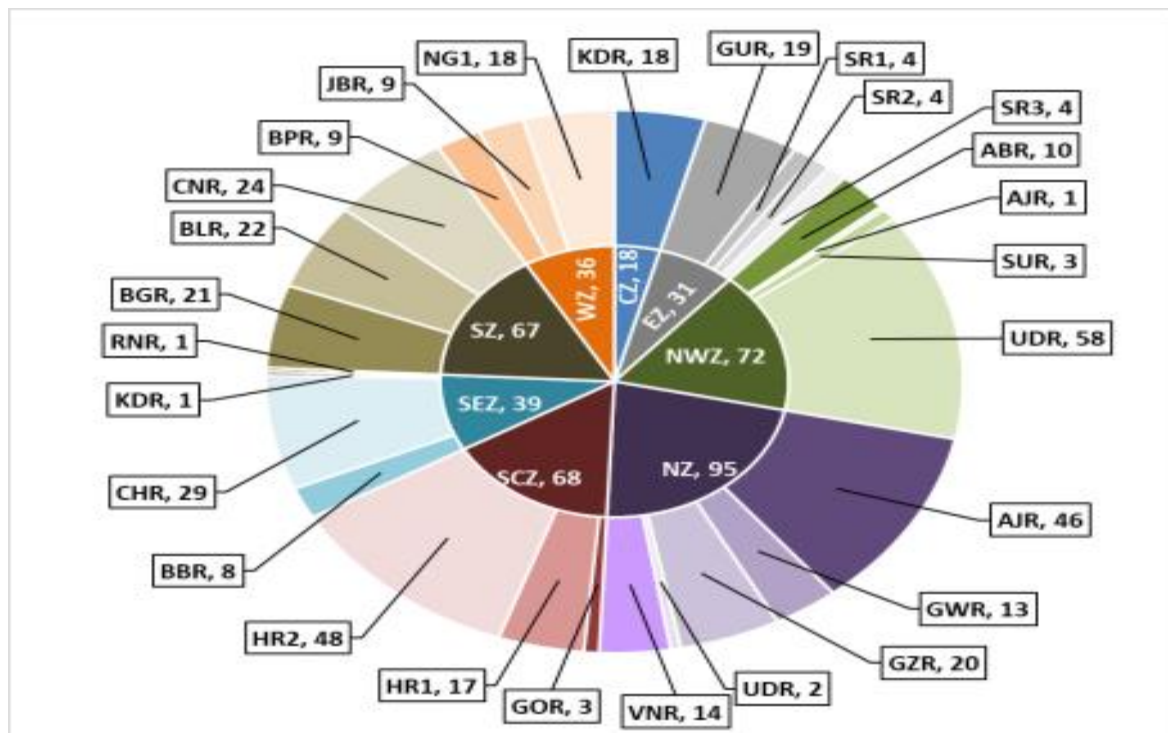


Figure 2.11

Zone and Region Wise Serious Accidents

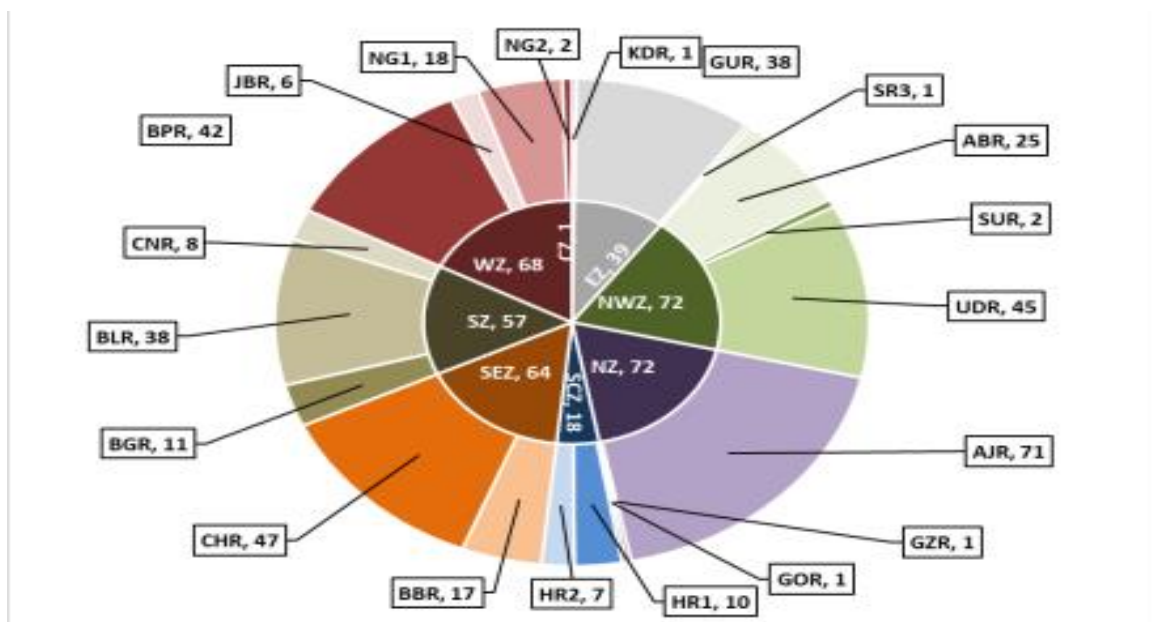
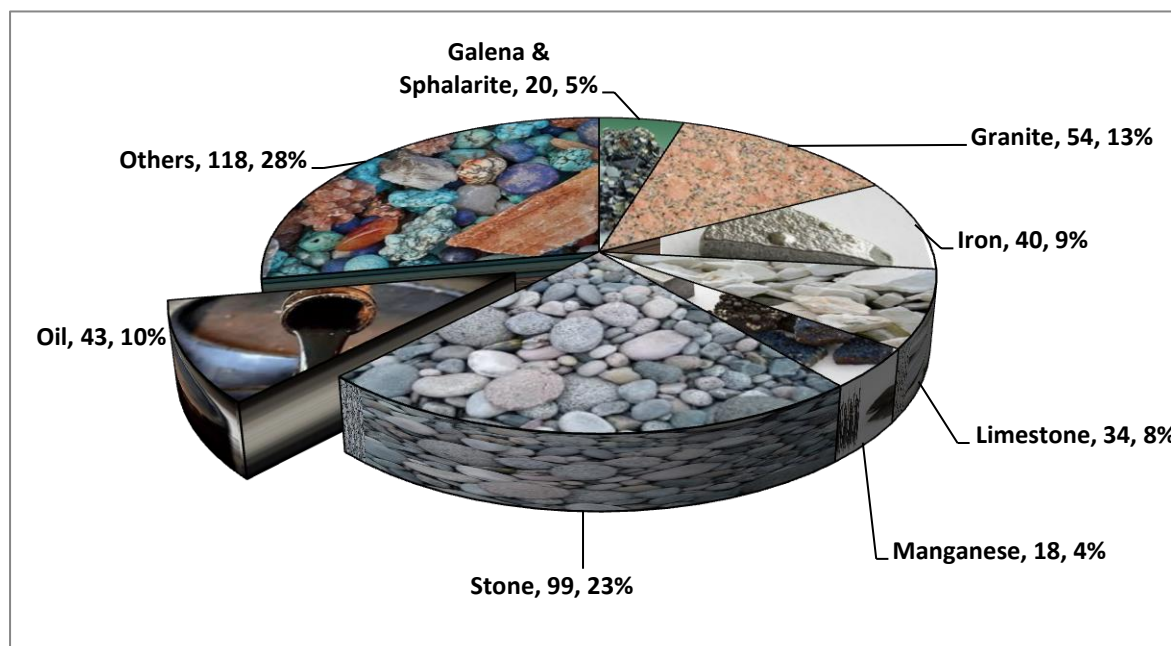


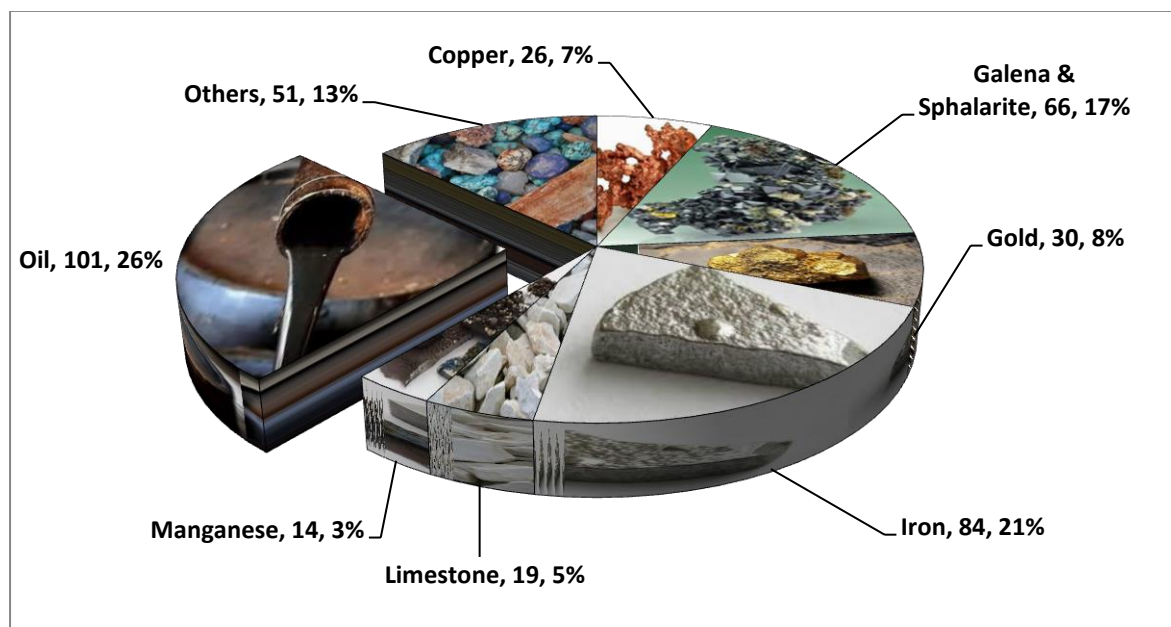
Figure 2.12

Mineral Wise Fatal Accident



- Out of total 426 fatal accidents in Non Coal Mines during the period 2013 to 2022, 10% (43) of the fatal accident happened in oil mines and remaining 90% (383) in Metalliferous Mines.

Mineral wise Serious Accident



- Out of total 391 serious accidents in Non Coal Mines during the period 2013 to 2022, 26% (101) of the fatal accident happened in oil mines and remaining 74% (290) in Metalliferous Mines.

Table 2.6 :Cause wise trend in dangerous occurrences in Non-Coal mines

| Sl.No. | Cause | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|--------|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1 | Over winding of cages, Skip of bucket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | Outbreak of fire underground | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 3 | Outbreak of fire on surface | 0 | 4 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 0 |
| 4 | Premature collapse of workings or failure of pillars | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | Breakage of winding rope | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | Breakdown of winding engine, crank shaft, bearing, etc | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | Ignition or occurrence of inflammable gas | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 8 | Breakage, fracture or failure of essential parts of machinery or apparatus whereby safety of persons were endangered | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 9 | Rock burst | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 10 | Irruption of water | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | Bursting of high-pressure equipment | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | Oil well blow out without fire | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | Others | 1 | 1 | 7 | 1 | 1 | 3 | 1 | 1 | 0 | 3 |
| | Total | 2 | 6 | 9 | 7 | 1 | 4 | 3 | 3 | 0 | 3 |

Table 2.7

Trend in number of accidents in Non-Coal mines, resultant casualties/seriously injured persons

| Mineral | Year | No. of fatal accidents | Number of persons Killed | Number of persons Seriously injured in fatal accidents | No. of serious accidents | Number of persons seriously injured |
|---------------------|------|------------------------|--------------------------|--|--------------------------|-------------------------------------|
| COPPER | 2013 | 0 | 0 | 0 | 7 | 8 |
| COPPER | 2014 | 1 | 1 | 0 | 1 | 1 |
| COPPER | 2015 | 1 | 1 | 0 | 2 | 2 |
| COPPER | 2016 | 1 | 1 | 0 | 2 | 2 |
| COPPER | 2017 | 0 | 0 | 0 | 2 | 2 |
| COPPER | 2018 | 1 | 1 | 1 | 2 | 2 |
| COPPER | 2019 | 3 | 3 | 0 | 3 | 3 |
| COPPER | 2020 | 0 | 0 | 0 | 1 | 1 |
| COPPER | 2022 | 2 | 2 | 2 | 6 | 6 |
| GALENA & SPHALARITE | 2013 | 3 | 3 | 0 | 10 | 10 |
| GALENA & SPHALARITE | 2014 | 2 | 2 | 1 | 12 | 12 |
| GALENA & SPHALARITE | 2015 | 3 | 3 | 0 | 4 | 4 |
| GALENA & SPHALARITE | 2016 | 1 | 1 | 0 | 3 | 3 |
| GALENA & SPHALARITE | 2017 | 2 | 5 | 2 | 3 | 3 |
| GALENA & SPHALARITE | 2018 | 4 | 4 | 1 | 5 | 5 |

| Mineral | Year | No. of fatal accidents | Number of persons Killed | Number of persons Seriously injured in fatal accidents | No. of serious accidents | Number of persons seriously injured |
|---------------------|------|------------------------|--------------------------|--|--------------------------|-------------------------------------|
| GALENA & SPHALARITE | 2019 | 1 | 1 | 0 | 15 | 15 |
| GALENA & SPHALARITE | 2020 | 0 | 0 | 0 | 3 | 4 |
| GALENA & SPHALARITE | 2021 | 2 | 3 | 0 | 8 | 8 |
| GALENA & SPHALARITE | 2022 | 2 | 2 | 0 | 3 | 3 |
| GOLD | 2013 | 1 | 1 | 0 | 2 | 2 |
| GOLD | 2014 | 0 | 0 | 0 | 2 | 2 |
| GOLD | 2015 | 1 | 1 | 0 | 4 | 4 |
| GOLD | 2016 | 0 | 0 | 0 | 1 | 1 |
| GOLD | 2017 | 0 | 0 | 0 | 1 | 1 |
| GOLD | 2018 | 0 | 0 | 0 | 3 | 3 |
| GOLD | 2019 | 1 | 1 | 0 | 5 | 6 |
| GOLD | 2020 | 1 | 1 | 0 | 1 | 1 |
| GOLD | 2021 | 0 | 0 | 0 | 5 | 5 |
| GOLD | 2022 | 1 | 1 | 1 | 6 | 6 |
| IRON | 2013 | 4 | 5 | 0 | 6 | 6 |
| IRON | 2014 | 3 | 3 | 1 | 9 | 14 |
| IRON | 2015 | 5 | 5 | 0 | 8 | 9 |
| IRON | 2016 | 3 | 3 | 0 | 8 | 9 |
| IRON | 2017 | 3 | 4 | 0 | 4 | 6 |

| Mineral | Year | No. of fatal accidents | Number of persons Killed | Number of persons Seriously injured in fatal accidents | No. of serious accidents | Number of persons seriously injured |
|-----------|------|------------------------|--------------------------|--|--------------------------|-------------------------------------|
| IRON | 2018 | 4 | 5 | 1 | 5 | 5 |
| IRON | 2019 | 4 | 4 | 0 | 13 | 14 |
| IRON | 2020 | 7 | 7 | 1 | 8 | 8 |
| IRON | 2021 | 5 | 6 | 0 | 11 | 11 |
| IRON | 2022 | 2 | 2 | 0 | 12 | 12 |
| LIMESTONE | 2013 | 3 | 3 | 0 | 3 | 3 |
| LIMESTONE | 2014 | 4 | 4 | 2 | 3 | 3 |
| LIMESTONE | 2015 | 5 | 5 | 0 | 1 | 1 |
| LIMESTONE | 2016 | 4 | 4 | 0 | 3 | 3 |
| LIMESTONE | 2017 | 5 | 6 | 0 | 0 | 0 |
| LIMESTONE | 2018 | 2 | 2 | 0 | 1 | 1 |
| LIMESTONE | 2019 | 6 | 6 | 1 | 0 | 0 |
| LIMESTONE | 2020 | 1 | 1 | 0 | 1 | 1 |
| LIMESTONE | 2021 | 3 | 3 | 0 | 5 | 6 |
| LIMESTONE | 2022 | 1 | 3 | 0 | 2 | 2 |
| MANGANESE | 2013 | 2 | 2 | 0 | 0 | 0 |
| MANGANESE | 2014 | 1 | 1 | 0 | 1 | 1 |
| MANGANESE | 2015 | 1 | 1 | 0 | 1 | 1 |
| MANGANESE | 2016 | 1 | 1 | 0 | 5 | 5 |

| Mineral | Year | No. of fatal accidents | Number of persons Killed | Number of persons Seriously injured in fatal accidents | No. of serious accidents | Number of persons seriously injured |
|-----------------------|------|------------------------|--------------------------|--|--------------------------|-------------------------------------|
| MANGANESE | 2017 | 3 | 4 | 2 | 0 | 0 |
| MANGANESE | 2018 | 1 | 1 | 0 | 1 | 1 |
| MANGANESE | 2019 | 3 | 3 | 1 | 0 | 0 |
| MANGANESE | 2020 | 3 | 5 | 1 | 0 | 0 |
| MANGANESE | 2021 | 1 | 1 | 0 | 1 | 1 |
| MANGANESE | 2022 | 2 | 2 | 0 | 5 | 5 |
| TOTAL : METALLIFEROUS | 2013 | 54 | 69 | 12 | 37 | 38 |
| TOTAL : METALLIFEROUS | 2014 | 34 | 40 | 10 | 34 | 40 |
| TOTAL : METALLIFEROUS | 2015 | 41 | 43 | 3 | 22 | 23 |
| TOTAL : METALLIFEROUS | 2016 | 30 | 41 | 9 | 30 | 31 |
| TOTAL : METALLIFEROUS | 2017 | 41 | 62 | 11 | 13 | 15 |
| TOTAL : METALLIFEROUS | 2018 | 43 | 49 | 10 | 22 | 22 |
| TOTAL : METALLIFEROUS | 2019 | 40 | 44 | 9 | 40 | 42 |
| TOTAL : METALLIFEROUS | 2020 | 33 | 42 | 7 | 16 | 17 |
| TOTAL : METALLIFEROUS | 2021 | 30 | 47 | 6 | 35 | 36 |
| TOTAL : METALLIFEROUS | 2022 | 37 | 51 | 13 | 41 | 45 |
| OIL | 2013 | 4 | 5 | 3 | 15 | 15 |
| OIL | 2014 | 5 | 5 | 0 | 10 | 10 |
| OIL | 2015 | 4 | 5 | 10 | 13 | 15 |

| Mineral | Year | No. of fatal accidents | Number of persons Killed | Number of persons Seriously injured in fatal accidents | No. of serious accidents | Number of persons seriously injured |
|------------------|------|------------------------|--------------------------|--|--------------------------|-------------------------------------|
| OIL | 2016 | 9 | 9 | 1 | 7 | 7 |
| OIL | 2017 | 1 | 1 | 0 | 9 | 13 |
| OIL | 2018 | 2 | 2 | 2 | 4 | 4 |
| OIL | 2019 | 5 | 10 | 1 | 18 | 18 |
| OIL | 2020 | 7 | 8 | 1 | 8 | 8 |
| OIL | 2021 | 3 | 3 | 0 | 10 | 10 |
| OIL | 2022 | 3 | 3 | 0 | 7 | 7 |
| TOTAL : NON-COAL | 2013 | 58 | 74 | 15 | 52 | 53 |
| TOTAL : NON-COAL | 2014 | 39 | 45 | 10 | 44 | 50 |
| TOTAL : NON-COAL | 2015 | 45 | 48 | 13 | 35 | 38 |
| TOTAL : NON-COAL | 2016 | 39 | 50 | 10 | 37 | 38 |
| TOTAL : NON-COAL | 2017 | 42 | 63 | 11 | 22 | 28 |
| TOTAL : NON-COAL | 2018 | 45 | 51 | 12 | 26 | 26 |
| TOTAL : NON-COAL | 2019 | 45 | 54 | 10 | 58 | 60 |
| TOTAL : NON-COAL | 2020 | 40 | 50 | 8 | 24 | 25 |
| TOTAL : NON-COAL | 2021 | 33 | 50 | 6 | 45 | 46 |
| TOTAL : NON-COAL | 2022 | 40 | 54 | 13 | 48 | 52 |

Table 2.8

Trend in accidents - placewise in Non-Coal mines

| Mineral | Year | Fatal Accidents | Serious Accidents | Fatalities BG | Fatalities OC | Fatalities AG | Overall | No. of persons seriously injured BG | No. of persons seriously injured OC | No. of persons seriously injured AG | Overall |
|---------------------|------|--------------------|----------------------|------------------|------------------|------------------|---------|---|---|---|---------|
| COPPER | 2013 | 0 | 7 | 0 | 0 | 0 | 0 | 5 | 0 | 3 | 8 |
| COPPER | 2014 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| COPPER | 2015 | 1 | 2 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 2 |
| COPPER | 2016 | 1 | 2 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 2 |
| COPPER | 2017 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 |
| COPPER | 2018 | 1 | 2 | 0 | 1 | 0 | 1 | 1 | 2 | 0 | 3 |
| COPPER | 2019 | 3 | 3 | 3 | 0 | 0 | 3 | 3 | 0 | 0 | 3 |
| COPPER | 2020 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| COPPER | 2022 | 2 | 6 | 2 | 0 | 0 | 2 | 6 | 0 | 2 | 8 |
| GALENA & SPHALARITE | 2013 | 3 | 10 | 2 | 0 | 1 | 3 | 6 | 0 | 4 | 10 |
| GALENA & SPHALARITE | 2014 | 2 | 12 | 2 | 0 | 0 | 2 | 9 | 3 | 1 | 13 |
| GALENA & SPHALARITE | 2015 | 3 | 4 | 2 | 1 | 0 | 3 | 3 | 0 | 1 | 4 |
| GALENA & SPHALARITE | 2016 | 1 | 3 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 3 |
| GALENA & SPHALARITE | 2017 | 2 | 3 | 0 | 0 | 5 | 5 | 1 | 0 | 4 | 5 |

| | | | | | | | | | | | |
|---------------------|------|---|----|---|---|---|---|---|---|----|----|
| GALENA & SPHALARITE | 2018 | 4 | 5 | 3 | 0 | 1 | 4 | 3 | 0 | 3 | 6 |
| GALENA & SPHALARITE | 2019 | 1 | 15 | 0 | 0 | 1 | 1 | 7 | 1 | 7 | 15 |
| GALENA & SPHALARITE | 2020 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 4 |
| GALENA & SPHALARITE | 2021 | 2 | 8 | 3 | 0 | 0 | 3 | 5 | 1 | 2 | 8 |
| GALENA & SPHALARITE | 2022 | 2 | 3 | 2 | 0 | 0 | 2 | 3 | 0 | 0 | 3 |
| GOLD | 2013 | 1 | 2 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 2 |
| GOLD | 2014 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| GOLD | 2015 | 1 | 4 | 0 | 0 | 1 | 1 | 3 | 0 | 1 | 4 |
| GOLD | 2016 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| GOLD | 2017 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| GOLD | 2018 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 3 |
| GOLD | 2019 | 1 | 5 | 1 | 0 | 0 | 1 | 6 | 0 | 0 | 6 |
| GOLD | 2020 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 |
| GOLD | 2021 | 0 | 5 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 5 |
| GOLD | 2022 | 1 | 6 | 1 | 0 | 0 | 1 | 3 | 0 | 4 | 7 |
| IRON | 2013 | 4 | 6 | 0 | 3 | 2 | 5 | 0 | 5 | 1 | 6 |
| IRON | 2014 | 3 | 9 | 0 | 0 | 3 | 3 | 0 | 9 | 6 | 15 |
| IRON | 2015 | 5 | 8 | 0 | 2 | 3 | 5 | 0 | 5 | 4 | 9 |
| IRON | 2016 | 3 | 8 | 0 | 3 | 0 | 3 | 0 | 3 | 6 | 9 |
| IRON | 2017 | 3 | 4 | 0 | 4 | 0 | 4 | 1 | 1 | 4 | 6 |
| IRON | 2018 | 4 | 5 | 0 | 4 | 1 | 5 | 0 | 3 | 3 | 6 |
| IRON | 2019 | 4 | 13 | 0 | 3 | 1 | 4 | 1 | 3 | 10 | 14 |
| IRON | 2020 | 7 | 8 | 0 | 4 | 3 | 7 | 0 | 3 | 6 | 9 |
| IRON | 2021 | 5 | 11 | 0 | 2 | 4 | 6 | 0 | 2 | 9 | 11 |

| | | | | | | | | | | | |
|-----------|------|----|----|---|----|---|----|---|---|---|----|
| IRON | 2022 | 2 | 12 | 0 | 2 | 0 | 2 | 0 | 3 | 9 | 12 |
| LIMESTONE | 2013 | 3 | 3 | 0 | 3 | 0 | 3 | 0 | 2 | 1 | 3 |
| LIMESTONE | 2014 | 4 | 3 | 0 | 4 | 0 | 4 | 0 | 5 | 0 | 5 |
| LIMESTONE | 2015 | 5 | 1 | 0 | 5 | 0 | 5 | 0 | 1 | 0 | 1 |
| LIMESTONE | 2016 | 4 | 3 | 0 | 4 | 0 | 4 | 0 | 1 | 2 | 3 |
| LIMESTONE | 2017 | 5 | 0 | 1 | 5 | 0 | 6 | 0 | 0 | 0 | 0 |
| LIMESTONE | 2018 | 2 | 1 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 1 |
| LIMESTONE | 2019 | 6 | 0 | 0 | 6 | 0 | 6 | 0 | 1 | 0 | 1 |
| LIMESTONE | 2020 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| LIMESTONE | 2021 | 3 | 5 | 0 | 1 | 2 | 3 | 0 | 1 | 5 | 6 |
| LIMESTONE | 2022 | 1 | 2 | 0 | 3 | 0 | 3 | 0 | 2 | 0 | 2 |
| MANGANESE | 2013 | 2 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 |
| MANGANESE | 2014 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| MANGANESE | 2015 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| MANGANESE | 2016 | 1 | 5 | 0 | 0 | 1 | 1 | 4 | 0 | 1 | 5 |
| MANGANESE | 2017 | 3 | 0 | 2 | 2 | 0 | 4 | 2 | 0 | 0 | 2 |
| MANGANESE | 2018 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| MANGANESE | 2019 | 3 | 0 | 3 | 0 | 0 | 3 | 1 | 0 | 0 | 1 |
| MANGANESE | 2020 | 3 | 0 | 3 | 2 | 0 | 5 | 1 | 0 | 0 | 1 |
| MANGANESE | 2021 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| MANGANESE | 2022 | 2 | 5 | 1 | 1 | 0 | 2 | 4 | 0 | 1 | 5 |
| STONE | 2013 | 12 | 0 | 0 | 19 | 0 | 19 | 0 | 4 | 0 | 4 |
| STONE | 2014 | 7 | 0 | 0 | 11 | 0 | 11 | 0 | 4 | 0 | 4 |
| STONE | 2015 | 6 | 0 | 0 | 7 | 0 | 7 | 0 | 1 | 0 | 1 |

| | | | | | | | | | | | |
|-----------------------|------|----|----|---|----|----|----|----|----|----|----|
| STONE | 2016 | 8 | 0 | 0 | 14 | 0 | 14 | 0 | 9 | 0 | 9 |
| STONE | 2017 | 14 | 0 | 0 | 23 | 0 | 23 | 0 | 6 | 0 | 6 |
| STONE | 2018 | 11 | 0 | 0 | 13 | 0 | 13 | 0 | 4 | 0 | 4 |
| STONE | 2019 | 8 | 0 | 0 | 12 | 0 | 12 | 0 | 3 | 0 | 3 |
| STONE | 2020 | 12 | 0 | 0 | 19 | 0 | 19 | 0 | 5 | 0 | 5 |
| STONE | 2021 | 8 | 0 | 0 | 12 | 0 | 12 | 0 | 4 | 0 | 4 |
| STONE | 2022 | 13 | 2 | 0 | 24 | 0 | 24 | 0 | 8 | 4 | 12 |
| TOTAL : METALLIFEROUS | 2013 | 54 | 37 | 4 | 60 | 5 | 69 | 15 | 23 | 12 | 50 |
| TOTAL : METALLIFEROUS | 2014 | 34 | 34 | 4 | 31 | 5 | 40 | 13 | 28 | 9 | 50 |
| TOTAL : METALLIFEROUS | 2015 | 41 | 22 | 4 | 34 | 5 | 43 | 10 | 9 | 7 | 26 |
| TOTAL : METALLIFEROUS | 2016 | 30 | 30 | 3 | 35 | 3 | 41 | 7 | 18 | 15 | 40 |
| TOTAL : METALLIFEROUS | 2017 | 41 | 13 | 3 | 52 | 7 | 62 | 7 | 8 | 11 | 26 |
| TOTAL : METALLIFEROUS | 2018 | 43 | 22 | 6 | 40 | 3 | 49 | 7 | 13 | 12 | 32 |
| TOTAL : METALLIFEROUS | 2019 | 40 | 40 | 8 | 33 | 3 | 44 | 19 | 13 | 19 | 51 |
| TOTAL : METALLIFEROUS | 2020 | 33 | 16 | 3 | 34 | 5 | 42 | 6 | 11 | 7 | 24 |
| TOTAL : METALLIFEROUS | 2021 | 30 | 35 | 5 | 24 | 18 | 47 | 11 | 11 | 20 | 42 |
| TOTAL : METALLIFEROUS | 2022 | 37 | 41 | 8 | 42 | 1 | 51 | 16 | 16 | 26 | 58 |
| OIL | 2013 | 4 | 15 | 0 | 0 | 5 | 5 | 0 | 0 | 18 | 18 |
| OIL | 2014 | 5 | 10 | 0 | 0 | 5 | 5 | 0 | 2 | 8 | 10 |
| OIL | 2015 | 4 | 13 | 0 | 0 | 5 | 5 | 0 | 0 | 25 | 25 |
| OIL | 2016 | 9 | 7 | 0 | 0 | 9 | 9 | 0 | 1 | 7 | 8 |
| OIL | 2017 | 1 | 9 | 0 | 0 | 1 | 1 | 0 | 0 | 13 | 13 |
| OIL | 2018 | 2 | 4 | 0 | 0 | 2 | 2 | 0 | 1 | 5 | 6 |
| OIL | 2019 | 5 | 18 | 0 | 0 | 10 | 10 | 0 | 0 | 19 | 19 |

| | | | | | | | | | | | |
|------------------|------|----|----|---|----|----|----|----|----|----|----|
| OIL | 2020 | 7 | 8 | 0 | 0 | 8 | 8 | 0 | 1 | 8 | 9 |
| OIL | 2021 | 3 | 10 | 0 | 0 | 3 | 3 | 0 | 0 | 10 | 10 |
| OIL | 2022 | 3 | 7 | 0 | 0 | 3 | 3 | 0 | 0 | 7 | 7 |
| TOTAL : NON-COAL | 2013 | 58 | 52 | 4 | 60 | 10 | 74 | 15 | 23 | 30 | 68 |
| TOTAL : NON-COAL | 2014 | 39 | 44 | 4 | 31 | 10 | 45 | 13 | 30 | 17 | 60 |
| TOTAL : NON-COAL | 2015 | 45 | 35 | 4 | 34 | 10 | 48 | 10 | 9 | 32 | 51 |
| TOTAL : NON-COAL | 2016 | 39 | 37 | 3 | 35 | 12 | 50 | 7 | 19 | 22 | 48 |
| TOTAL : NON-COAL | 2017 | 42 | 22 | 3 | 52 | 8 | 63 | 7 | 8 | 24 | 39 |
| TOTAL : NON-COAL | 2018 | 45 | 26 | 6 | 40 | 5 | 51 | 7 | 14 | 17 | 38 |
| TOTAL : NON-COAL | 2019 | 45 | 58 | 8 | 33 | 13 | 54 | 19 | 13 | 38 | 70 |
| TOTAL : NON-COAL | 2020 | 40 | 24 | 3 | 34 | 13 | 50 | 6 | 12 | 15 | 33 |
| TOTAL : NON-COAL | 2021 | 33 | 45 | 5 | 24 | 21 | 50 | 11 | 11 | 30 | 52 |
| TOTAL : NON-COAL | 2022 | 40 | 48 | 8 | 42 | 4 | 54 | 16 | 16 | 33 | 65 |

BG: Below Ground, OC:Open Cast, AG: Above Ground

Table 2.9

CAUSEWISE TREND OF FATAL ACCIDENTS IN NON-COAL MINES

| Cause/Year | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---------|-------|---------|-------|--------|--------|-------|---------|---------|---------|
| GROUND MOVEMENT | | | | | | | | | | |
| Fall of Roof | 2 (2) | 3 (3) | 2 (2) | 0 (0) | 1 (1) | 3 (3) | 4 (4) | 1 (2) | 0 (0) | 2 (2) |
| Fall of Sides | 13 (24) | 5 (9) | 5 (6) | 6 (9) | 8 (17) | 9 (13) | 7 (7) | 7 (13) | 11 (19) | 11 (24) |
| Other Ground Movement | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 1 (1) | 1 (1) | 0 (0) | 0 (0) | 0 (0) | 0 (0) |
| TRANSPORTATION MACHINERY (WINDING IN SHAFT) | 1 (2) | 2 (3) | 2 (2) | 1 (1) | 1 (1) | 1 (1) | 1 (1) | 0 (0) | 0 (0) | 2 (2) |
| TRANSPORTATION MACHINERY (OTHER THAN WINDING IN SHAFT) | | | | | | | | | | |
| Rope Haulage | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 1 (1) |
| Wheeled Trackless Transp | 8 (8) | 7 (7) | 13 (13) | 8 (8) | 5 (6) | 9 (9) | 5 (5) | 10 (11) | 2 (2) | 6 (6) |
| Other Transp. Machinery | 3 (3) | 0 (0) | 2 (2) | 0 (0) | 1 (1) | 0 (0) | 0 (0) | 0 (0) | 2 (2) | 0 (0) |
| MACHINERY OTHER THAN TRANSPORTATION MACHINERY | 4 (4) | 5 (5) | 2 (2) | 1 (1) | 6 (9) | 7 (9) | 4 (4) | 5 (5) | 4 (4) | 1 (1) |
| EXPLOSIVES | 2 (3) | 2 (3) | 0 (0) | 3 (7) | 4 (7) | 0 (0) | 6 (8) | 0 (0) | 5 (14) | 1 (1) |
| ELECTRICITY | 2 (2) | 3 (3) | 2 (2) | 0 (0) | 2 (3) | 1 (1) | 3 (3) | 2 (2) | 1 (1) | 0 (0) |
| GAS, DUST & OTHER | | | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| COMBUSTIBLE MATERIAL | 3 (4) | 0 (0) | 1 (2) | 1 (1) | 0 (0) | 1 (1) | 1 (6) | 2 (3) | 0 (0) | 0 (0) |
| FALL (OTHER THAN FALLS OF GROUND) | | | | | | | | | | |
| Fall of person | 9 (10) | 8 (8) | 9 (10) | 9 (11) | 8 (8) | 6 (6) | 10 (10) | 9 (10) | 5 (5) | 10 (11) |
| Fall of Object | 8 (9) | 2 (2) | 4 (4) | 4 (4) | 4 (8) | 4 (4) | 2 (2) | 2 (2) | 0 (0) | 2 (2) |
| Other falls | 0 (0) | 1 (1) | 0 (0) | 1 (1) | 1 (1) | 2 (2) | 0 (0) | 0 (0) | 0 (0) | 0 (0) |
| OTHER CAUSES | | | | | | | | | | |
| Irruption of Water | 0 (0) | 0 (0) | 0 (0) | 1 (3) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) |
| Flying Pieces | 2 (2) | 0 (0) | 2 (2) | 1 (1) | 0 (0) | 0 (0) | 0 (0) | 1 (1) | 1 (1) | 2 (2) |
| Miscellaneous | 1 (1) | 1 (1) | 1 (1) | 3 (3) | 0 (0) | 1 (1) | 2 (4) | 1 (1) | 2 (2) | 2 (2) |
| T O T A L | 58 (74) | 39 (45) | 45 (48) | 39 (50) | 42 (63) | 45 (51) | 45 (54) | 40 (50) | 33 (50) | 40 (54) |
| BELOW GROUND | 4 (4) | 4 (4) | 4 (4) | 1 (3) | 3 (3) | 5 (6) | 8 (8) | 2 (3) | 4 (5) | 8 (8) |
| OPENCAST | 45 (60) | 25 (31) | 32 (34) | 26 (35) | 34 (52) | 35 (40) | 29 (33) | 26 (34) | 17 (24) | 28 (42) |
| ABOVE GROUND | 9 (10) | 10 (10) | 9 (10) | 12 (12) | 5 (8) | 5 (5) | 8 (13) | 12 (13) | 12 (21) | 4 (4) |

NOTE : Figures within parentheses denote the number of persons killed.

Table 2.10

CAUSEWISE TREND OF SERIOUS ACCIDENTS IN NON-COAL MINES

| Cause/Year | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---------|---------|-------|-------|-------|-------|-------|-------|-------|-------|
| GROUND MOVEMENT | | | | | | | | | | |
| Fall of Roof | 2 (2) | 0 (1) | 3 (3) | 0 (0) | 0 (2) | 0 (1) | 1 (2) | 0 (0) | 0 (0) | 0 (1) |
| Fall of Sides | 0 (6) | 0 (1) | 2 (2) | 3 (3) | 0 (3) | 1 (2) | 0 (5) | 0 (4) | 1 (5) | 2 (8) |
| Other Ground Movement | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 2 (2) | 0 (0) | 0 (0) | 0 (0) |
| TRANSPORTATION MACHINERY | | | | | | | | | | |
| (WINDING IN SHAFT) | 0 (1) | 2 (4) | 1 (1) | 0 (0) | 2 (2) | 0 (0) | 1 (1) | 0 (0) | 1 (1) | 0 (1) |
| TRANSPORTATION MACHINERY (OTHER THAN WINDING IN SHAFT) | | | | | | | | | | |
| Rope Haulage | 0 (0) | 0 (0) | 0 (0) | 1 (1) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) |
| Wheeled Trackless Transp | 6 (8) | 4 (9) | 0 (1) | 1 (2) | 0 (1) | 0 (2) | 3 (3) | 2 (4) | 3 (3) | 3 (3) |
| Other Transp. Machinery | 0 (0) | 2 (2) | 1 (1) | 1 (2) | 0 (0) | 1 (1) | 2 (2) | 0 (0) | 2 (2) | 5 (5) |
| MACHINERY OTHER THAN TRANSPORTATION MACHINERY | | | | | | | | | | |
| | 12 (12) | 11 (13) | 5 (5) | 3 (3) | 4 (6) | 2 (5) | 6 (6) | 2 (2) | 8 (9) | 5 (5) |
| EXPLOSIVES | | | | | | | | | | |
| | 0 (1) | 0 (3) | 0 (0) | 0 (5) | 0 (2) | 1 (1) | 0 (3) | 1 (1) | 0 (1) | 0 (1) |

| | | | | | | | | | | |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| ELECTRICITY | 0 (0) | 1 (1) | 1 (2) | 2 (2) | 1 (3) | 0 (0) | 2 (2) | 1 (1) | 0 (0) | 1 (1) |
| GAS, DUST & OTHER COMBUSTIBLE MATERIAL | 0 (2) | 2 (4) | 1 (12) | 1 (1) | 1 (5) | 0 (2) | 0 (0) | 0 (0) | 0 (0) | 1 (1) |
| FALL (OTHER THAN FALLS OF GROUND) | | | | | | | | | | |
| Fall of person | 11 (12) | 10 (10) | 5 (6) | 14 (17) | 4 (4) | 7 (7) | 14 (15) | 5 (6) | 5 (5) | 8 (13) |
| Fall of Object | 16 (19) | 9 (9) | 9 (9) | 6 (7) | 4 (5) | 4 (5) | 10 (10) | 6 (8) | 5 (5) | 2 (2) |
| Other falls | 1 (1) | 0 (0) | 0 (0) | 1 (1) | 0 (0) | 2 (4) | 1 (1) | 1 (1) | 2 (2) | 1 (1) |
| OTHER CAUSES | | | | | | | | | | |
| Irruption of Water | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) |
| Flying Pieces | 1 (1) | 1 (1) | 1 (2) | 0 (0) | 1 (1) | 0 (0) | 0 (0) | 1 (1) | 2 (2) | 2 (2) |
| Miscellaneous | 3 (3) | 2 (2) | 6 (7) | 4 (4) | 5 (5) | 8 (8) | 16 (18) | 5 (5) | 16 (17) | 18 (21) |
| T O T A L | 52 (68) | 44 (60) | 35 (51) | 37 (48) | 22 (39) | 26 (38) | 58 (70) | 24 (33) | 45 (52) | 48 (65) |
| BELOW GROUND | 15 (15) | 12 (13) | 10 (10) | 7 (7) | 5 (7) | 6 (7) | 17 (19) | 4 (6) | 11 (11) | 13 (16) |
| OPENCAST | 11 (23) | 18 (30) | 5 (9) | 10 (19) | 2 (8) | 7 (14) | 5 (13) | 6 (12) | 6 (11) | 6 (16) |
| ABOVE GROUND | 26 (30) | 14 (17) | 20 (32) | 20 (22) | 15 (24) | 13 (17) | 36 (38) | 14 (15) | 28 (30) | 29 (33) |

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 Non-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) |
|------|--------------------|-----|------------------|-----|---|--|
| | Metal | Oil | Metal | Oil | | |
| 2013 | 3898 | 329 | 449 | 60 | 207 | 472 |
| 2014 | 4694 | 588 | 540 | 111 | 445 | 670 |
| 2015 | 5889 | 786 | 653 | 36 | 85 | 106 |
| 2016 | 7766 | 638 | 586 | 96 | 276 | 247 |
| 2017 | 4813 | 639 | 1068 | 32 | 160 | 140 |
| 2018 | 4258 | 606 | 618 | 54 | 137 | 121 |
| 2019 | 3136 | 492 | 565 | 83 | 35 | 50 |
| 2020 | 1123 | 164 | 370 | 119 | 33 | 23 |
| 2021 | 1534 | 230 | 399 | 48 | 40 | 62 |
| 2022 | 3898 | 719 | 542 | 48 | 78 | 194 |



2016



3. ACCIDENT ANALYSIS IN NON-COAL MINES: 2016

- The number of fatal accidents in non coal mines in the year 2016 stands at 39 (Including 9 accidents in Oil Mine) with 50 fatalities (Including 9 fatalities in Oil Mine) and 10 seriously injured (Including 1 injury in Oil Mine) in these fatal accidents. The number of fatal accidents has decreased as compared to previous year 2015.
- The number of serious accidents in the year 2016 stands at 37(including 7 serious accidents in Oil Mine) with 38 seriously injured persons (including 7 serious injuries in Oil Mine) in these serious accidents. The number of serious accidents has increased as compared to previous year 2015.
- Among the broad categories of causes, most number of fatal accident occurred due to “Fall of Persons from Height/into Depth”. Most number of serious accidents occurred due to “Fall of Persons from Height/into Depth”. Details can be seen in the statement 3.2.
- Maximum number of fatal accidents occurred in Oil Mines whereas maximum number of serious accidents occurred in Iron Ore Mine. Details can be seen in the statement 3.1.
- Maximum number of fatal accidents occurred in the mines under the Southern Zone and Eastern Zone of this Directorate and maximum number of serious accidents occurred in the mines under Western Zone of this Directorate.
- Major Accident (Disaster): No Major Accident occurred during the year.

STATEMENT 3.1

Accidents and placewise casualties in non-coal mines by state-district wise in 2016

| 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 | | | |
| | | | | | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 1. | Oil | | | | | | | | | | | | | | |
| | Assam | | | | | | | | | | | | | | |
| | Dibrugarh | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 2 |
| | Jorhat | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sibsagar | 3 | 1 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 1 |
| | TOTAL : ASSAM | 5 | 3 | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 1 | 0 | 2 | 0 | 3 |
| | Gujarat | | | | | | | | | | | | | | |
| | Bharuch | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| | Mehasana | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| | Vadodara (Baroda) | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | TOTAL : GUJARAT | 1 | 3 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 4 |
| | Tamil Nadu | | | | | | | | | | | | | | |
| | Thanjavur | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | TOTAL : TAMIL NADU | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | West Bengal | | | | | | | | | | | | | | |
| | Birbhum | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Burdwan | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TOTAL : WEST BENGAL | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : OIL | 9 | 7 | 0 | 0 | 0 | 9 | 0 | 9 | 0 | 1 | 0 | 7 | 0 | 8 |
| 2. Asbestos | | | | | | | | | | | | | | |
| Rajasthan | | | | | | | | | | | | | | |
| Udaipur | 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 |
| ALL INDIA : ASBESTOS | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3. Copper | | | | | | | | | | | | | | |
| Jharkhand | | | | | | | | | | | | | | |
| West Singbhum | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| TOTAL : JHARKHAND | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Madhya Pradesh | | | | | | | | | | | | | | |
| Balaghat | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : MADHYA PRADESH | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rajasthan | | | | | | | | | | | | | | |
| Jhunjhunu | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : RAJASTHAN | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| ALL INDIA : COPPER | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 2 |
| 4. Dolomite | | | | | | | | | | | | | | |
| Andhra Pradesh | | | | | | | | | | | | | | |
| Kurnool | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : ANDHRA PRADESH | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rajasthan Banswara | 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 |
| Telangana Khammam | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : TELANGANA | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| ALL INDIA : DOLOMITE | 2 | 1 | 0 | 1 | 3 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 1 |
| 5. Galena & Sphalarite | | | | | | | | | | | | | | |
| Rajasthan | | | | | | | | | | | | | | |
| Bhilwara | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| Udaipur | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| TOTAL : RAJASTHAN | 1 | 3 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 3 |
| ALL INDIA : GALENA & SPHALARITE | 1 | 3 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 3 |
| 6. Gold | | | | | | | | | | | | | | |
| Karnataka | | | | | | | | | | | | | | |
| Raichur | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| TOTAL : KARNATAKA | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| ALL INDIA : GOLD | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 7. Granite | | | | | | | | | | | | | | |
| Andhra Pradesh | | | | | | | | | | | | | | |
| Prakasham | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : ANDHRA PRADESH | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| Karnataka | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Koppal | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : KARNATAKA | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tamil Nadu | | | | | | | | | | | | | | |
| Salem | 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 : GRANITE | 6 | 1 | 0 | 7 | 0 | 0 | 0 | 7 | 0 | 1 | 0 | 0 | 0 | 1 |
| 8. Iron | | | | | | | | | | | | | | |
| Chhattisgarh | | | | | | | | | | | | | | |
| Durg | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| Dantewara | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 5 |
| TOTAL : CHHATTISGARH | 1 | 6 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 3 | 0 | 6 |
| Goa | | | | | | | | | | | | | | |
| North Goa | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| TOTAL : GOA | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Jharkhand | | | | | | | | | | | | | | |
| West Singbhum | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| TOTAL : JHARKHAND | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| Karnataka | | | | | | | | | | | | | | |
| Bellary | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chitradurga | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : KARNATAKA | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : IRON | 3 | 8 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 6 | 0 | 9 |

9. Limestone

| | | | | | | | | | | | | | | |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chhattisgarh | | | | | | | | | | | | | | |
| Durg | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| Raipur | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : CHHATTISGARH | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 2 |
| <hr/> | | | | | | | | | | | | | | |
| Rajasthan | | | | | | | | | | | | | | |
| Chittorgarh | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kota | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : RAJASTHAN | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| Tamil Nadu | | | | | | | | | | | | | | |
| Coimbatore | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Tirunelveli | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : TAMIL NADU | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| <hr/> | | | | | | | | | | | | | | |
| ALL INDIA : LIMESTONE | 4 | 3 | 0 | 3 | 1 | 0 | 0 | 4 | 0 | 1 | 0 | 2 | 0 | 3 |
| <hr/> | | | | | | | | | | | | | | |
| 10. Manganese | | | | | | | | | | | | | | |
| Madhya Pradesh | | | | | | | | | | | | | | |
| Balaghat | 1 | 3 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 3 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : MADHYA PRADESH | 1 | 3 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 3 |
| <hr/> | | | | | | | | | | | | | | |
| Maharashtra | | | | | | | | | | | | | | |
| Nagpur | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : MAHARASHTRA | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| <hr/> | | | | | | | | | | | | | | |
| ALL INDIA : MANGANESE | 1 | 5 | 0 | 0 | 0 | 1 | 0 | 1 | 4 | 0 | 0 | 1 | 0 | 5 |
| <hr/> | | | | | | | | | | | | | | |
| 11. Sillimanite | | | | | | | | | | | | | | |
| Kerala | | | | | | | | | | | | | | |
| Kollam | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 |
| <hr/> | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TOTAL : KERALA | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 |
| Orissa | | | | | | | | | | | | | | |
| Ganjam | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : ORISSA | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| ALL INDIA : SILLIMANITE | 1 | 6 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 5 | 0 | 6 |
| 12. Steatite | | | | | | | | | | | | | | |
| Uttaranchal | | | | | | | | | | | | | | |
| Bageshwer | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : UTTARANCHAL | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : STEATITE | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13. Stone | | | | | | | | | | | | | | |
| Haryana | | | | | | | | | | | | | | |
| Bhiwani | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : HARYANA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jharkhand | | | | | | | | | | | | | | |
| Koderma | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Giridih | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : JHARKHAND | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 1 |
| Maharashtra | | | | | | | | | | | | | | |
| Nagpur | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : MAHARASHTRA | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 1 |
| Tamil Nadu | | | | | | | | | | | | | | |
| Madurai | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 1 |
| Virudhunagar | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 2 |

| | | | | | | | | | | | | | | |
|--|----|----|---|----|---|----|---|----|---|----|---|----|---|----|
| Kancheepuram | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : TAMIL NADU | 3 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 3 | 0 | 0 | 0 | 3 |
| Uttar Pradesh Sonbhadra | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 4 | 0 | 0 | 0 | 4 |
| TOTAL : UTTAR PRADESH | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 4 | 0 | 0 | 0 | 4 |
| ALL INDIA : STONE | 8 | 0 | 0 | 14 | 0 | 0 | 0 | 14 | 0 | 9 | 0 | 0 | 0 | 9 |
| 14. Atomic Mineral Jharkhand West Singbhum | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : JHARKHAND | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : ATOMIC MINERAL | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : ALL NON-COAL MINERALS | 39 | 37 | 3 | 31 | 4 | 12 | 0 | 50 | 7 | 19 | 0 | 22 | 0 | 48 |

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

Number of accidents and casualties/seriously injured persons in non-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 |
| | | | | | | | | | | | | | | | | | | | | |
| Dolomite | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 |
| Gold | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Granite | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 |
| Manganese | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Stone | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 |
| TOTAL : FALL OF SIDES (OTHER THAN OVERHANGS) | 0 | 0 | 0 | 3 | 3 | 6 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 9 | 0 | 3 | 3 |
| | | | | | | | | | | | | | | | | | | | | |
| TOTAL : GROUND MOVEMENT | 0 | 0 | 0 | 3 | 3 | 6 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 9 | 0 | 3 | 3 |
| | | | | | | | | | | | | | | | | | | | | |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : FALLS OF OBJECTS FROM CAGES, SKIP ETC. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | | | | | |
| TOTAL : TRANSPORTATION MACHINERY (WINDING) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | | | | | |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : ROPE HAULAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| | | | | | | | | | | | | | | | | | | | | |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 1 | 2 |
| TOTAL : CONVEYORS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 1 | 2 |
| | | | | | | | | | | | | | | | | | | | | |
| Iron | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| TOTAL : DUMPERS | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | | | | | |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Iron | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| Manganese | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| TOTAL : WHEELED TRACKLESS (TRUCK, TANKER, ETC.) | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 4 | 4 | 1 | 1 | 1 |

| | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TOTAL : TRANSPORTATION MACHINERY (NON-WINDING) | 0 | 0 | 0 | 0 | 0 | 7 | 7 | 1 | 0 | 0 | 1 | 1 | 0 | 3 | 4 | 8 | 8 | 1 | 3 | 4 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : SHOVEL, DRAGLINES, FRONTEND LOADER, ETC. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Copper | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : OTHER HEAVY EARTH MOVING MACHINERY | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Copper | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| TOTAL : OTHER NON-TRANSPORTATION MACHINERY | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| TOTAL : MACHINERY OTHER THAN TRANSP. MACHINERY | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 3 | 3 |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| TOTAL : OTHER PROJECTILES | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 5 | 0 | 0 |
| TOTAL : OTHER EXPLOSIVE ACCIDENTS | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 5 | 0 | 0 |
| TOTAL : EXPLOSIVES | 0 | 0 | 0 | 0 | 0 | 3 | 7 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 7 | 5 | 0 | 0 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : SWITCH GEARS,GATE END BOXES,POMMEL,ETC. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 |
| TOTAL : ELECTRICITY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Granite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : OTHER ACCIDENTS DUE TO DUST/GAS/FIRE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| TOTAL : DUST, GAS & OTHER COMBUSTIBLE MATERIAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 2 | 1 | 1 | 0 | 2 | 2 |
| Asbestos | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Dolomite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Galena & Sphalarite | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 3 | 3 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 0 | 1 | 1 |

| | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|----|----|---|----|----|----|----|---|----|----|----|----|----|----|----|
| Manganese | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Sillimanite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 2 | 2 | 1 | 1 | 0 | 3 | 3 |
| Stone | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 3 | 0 | 0 |
| TOTAL : FALL OF PERSON FROM HEIGHT/INTO DEPTH | 0 | 0 | 0 | 2 | 2 | 6 | 8 | 3 | 2 | 2 | 3 | 3 | 0 | 7 | 7 | 9 | 11 | 3 | 11 | 11 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Sillimanite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 2 |
| TOTAL : FALL OF PERSONS ON THE SAME LEVEL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 3 | 3 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | 1 | 1 | 3 | 3 | 1 | 1 | 1 |
| Dolomite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Galena & Sphalarite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Manganese | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 |
| Steatite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : FALL OF OBJECTS INCL. ROLLING OBJECTS | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 2 | 2 | 3 | 3 | 1 | 3 | 3 | 4 | 4 | 1 | 6 | 6 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Galena & Sphalarite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : OTHER ACCIDENTS DUE TO FALLS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| ----- | | | | | | | | | | | | | | | | | | | | |
| TOTAL : FALLS (OTHER THAN FALL OF GROUND) | 0 | 0 | 0 | 3 | 3 | 7 | 9 | 3 | 5 | 5 | 7 | 7 | 1 | 13 | 13 | 14 | 16 | 4 | 21 | 21 |
| ----- | | | | | | | | | | | | | | | | | | | | |
| Atomic Mineral | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 |
| TOTAL : IRRUPTION OF WATER | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : FLYING PIECES (EXCEPT DUE TO EXPLOSIVES) | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : BURIED IN SANDS, ETC. | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 0 | 1 | 1 | 2 | 2 | 0 | 2 | 2 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Sillimanite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : UNCLASSIFIED | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 0 | 4 | 5 |
| ----- | | | | | | | | | | | | | | | | | | | | |
| TOTAL : OTHER CAUSES | 1 | 3 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 5 | 7 | 0 | 4 | 4 |
| ----- | | | | | | | | | | | | | | | | | | | | |
| ALL INDIA : ALL NON-COAL MINERALS | 1 | 3 | 0 | 7 | 7 | 26 | 35 | 9 | 10 | 10 | 12 | 12 | 1 | 20 | 21 | 39 | 50 | 10 | 37 | 38 |
| ----- | | | | | | | | | | | | | | | | | | | | |

STATEMENT 3.3**Causewise number of fatal accidents in Non-Coal Mines for different companies in 2016**

| Cause/Mineral | Oil | Copper | Galena | Gold | Iron | Lime- Stone | Mang- anese | Stone | Others | TOTAL |
|--------------------|-----|--------|--------|------|------|----------------|----------------|-------|--------|-------|
| Fall of Sides | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 6 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 3-0 | 6-0 | 9-0 |
| Rope Haulage | 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 |
| Dumpers | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 4 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 2-0 | 2-0 | 0-0 | 0-0 | 0-0 | 4-0 |
| Trucks | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 4 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 1-0 | 0-0 | 1-0 | 1-1 | 1-0 | 4-1 |
| Other Machinery | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Killed-S/Injured : | 1-0 | 1-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 2-0 |
| Explosives | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 5-5 | 2-0 | 7-5 |
| Fall of Persons | 1 | 0 | 1 | 0 | 0 | 2 | 0 | 2 | 3 | 9 |
| Killed-S/Injured : | 1-0 | 0-0 | 1-0 | 0-0 | 0-0 | 2-0 | 0-0 | 4-3 | 3-0 | 11-3 |
| Fall of Objects | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| Killed-S/Injured : | 3-1 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 1-0 | 4-1 |
| Other causes | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 7 |
| Killed-S/Injured : | 4-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 1-0 | 4-0 | 9-0 |

| | | | | | | | | | | |
|--------------------|-----|-----|-----|-----|-----|-----|-----|------|------|-------|
| Belowground | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 3-0 | 3-0 |
| Opencast | 0 | 1 | 0 | 0 | 3 | 4 | 0 | 8 | 10 | 26 |
| Killed-S/Injured : | 0-0 | 1-0 | 0-0 | 0-0 | 3-0 | 4-0 | 0-0 | 14-9 | 13-0 | 35-9 |
| Aboveground | 9 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 12 |
| Killed-S/Injured : | 9-1 | 0-0 | 1-0 | 0-0 | 0-0 | 0-0 | 1-0 | 0-0 | 1-0 | 12-1 |
| ----- | | | | | | | | | | |
| TOTAL | 9 | 1 | 1 | 0 | 3 | 4 | 1 | 8 | 12 | 39 |
| Killed-S/Injured : | 9-1 | 1-0 | 1-0 | 0-0 | 3-0 | 4-0 | 1-0 | 14-9 | 17-0 | 50-10 |
| ----- | | | | | | | | | | |

STATEMENT 3.4

Causewise number of serious accidents in Non-Coal Mines for different companies in 2016

| Cause/Mineral | Oil | Copper | Galena | Gold | Iron | Lime- Stone | Mang- anese | Stone | Others | TOTAL |
|--------------------------------|--------|--------|--------|--------|--------|----------------|----------------|--------|--------|----------|
| Fall of Sides S/Injured : | 0 0 | 0 0 | 0 0 | 1 1 | 0 0 | 0 0 | 2 2 | 0 0 | 0 0 | 3 3 |
| Rope Haulage S/Injured : | 1 1 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 1 1 |
| Dumpers S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Trucks S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 1 1 | 0 0 | 0 0 | 0 0 | 0 0 | 1 1 |
| Other Machinery S/Injured : | 1 1 | 2 2 | 0 0 | 0 0 | 1 2 | 0 0 | 0 0 | 0 0 | 0 0 | 4 5 |
| Explosives S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Fall of Persons S/Injured : | 2 2 | 0 0 | 1 1 | 0 0 | 4 4 | 1 1 | 1 1 | 0 0 | 5 5 | 14 14 |
| Fall of Objects S/Injured : | 1 1 | 0 0 | 1 1 | 0 0 | 0 0 | 1 1 | 2 2 | 0 0 | 1 1 | 6 6 |
| Other causes S/Injured : | 2 2 | 0 0 | 1 1 | 0 0 | 2 2 | 1 1 | 0 0 | 0 0 | 2 2 | 8 8 |

| | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|----|
| Belowground | 0 | 1 | 1 | 1 | 0 | 0 | 4 | 0 | 0 | 7 |
| S/Injured : | 0 | 1 | 1 | 1 | 0 | 0 | 4 | 0 | 0 | 7 |
| Opencast | 1 | 1 | 1 | 0 | 3 | 1 | 0 | 0 | 3 | 10 |
| S/Injured : | 1 | 1 | 1 | 0 | 3 | 1 | 0 | 0 | 3 | 10 |
| Aboveground | 6 | 0 | 1 | 0 | 5 | 2 | 1 | 0 | 5 | 20 |
| S/Injured : | 6 | 0 | 1 | 0 | 6 | 2 | 1 | 0 | 5 | 21 |
| ----- | | | | | | | | | | |
| TOTAL | 7 | 2 | 3 | 1 | 8 | 3 | 5 | 0 | 8 | 37 |
| S/Injured : | 7 | 2 | 3 | 1 | 9 | 3 | 5 | 0 | 8 | 38 |
| ----- | | | | | | | | | | |

STATEMENT 3.5

Regionwise/zonewise number of accidents and resultant casualties/seriously injured persons in non-coal mines in 2016

| Region/Zone | Fatal Accidents | | | Serious Accidents | |
|--------------------|------------------|------------|-----------|-------------------|-----------|
| | No. of Accidents | Fatalities | S/Injured | No. of Accidents | S/Injured |
| Koderma | 2 | 3 | 1 | 0 | 0 |
| Central Zone | 2 | 3 | 1 | 0 | 0 |
| Guwahati | 5 | 5 | 0 | 3 | 3 |
| Sitarampur I | 2 | 2 | 0 | 0 | 0 |
| Sitarampur II | 1 | 1 | 0 | 0 | 0 |
| Eastern Zone | 8 | 8 | 0 | 3 | 3 |
| Ahmedabad | 0 | 0 | 0 | 2 | 2 |
| Surat | 0 | 0 | 0 | 1 | 1 |
| Udaipur | 4 | 4 | 0 | 1 | 1 |
| North-Western Zone | 4 | 4 | 0 | 4 | 4 |
| Ajmer | 0 | 0 | 0 | 3 | 3 |
| Gwalior | 1 | 1 | 0 | 0 | 0 |
| Ghaziabad | 2 | 2 | 0 | 0 | 0 |
| Udaipur | 1 | 1 | 1 | 0 | 0 |
| Varanasi | 1 | 3 | 4 | 0 | 0 |
| Northern Zone | 5 | 7 | 5 | 3 | 3 |
| Goa | 0 | 0 | 0 | 1 | 1 |
| Hyderabad I | 0 | 0 | 0 | 1 | 1 |
| Hyderabad II | 5 | 5 | 0 | 0 | 0 |
| South-Central Zone | 5 | 5 | 0 | 2 | 2 |
| Bhubaneswar | 1 | 1 | 0 | 1 | 1 |
| Chaibasa | 1 | 3 | 0 | 2 | 3 |
| South-Eastern Zone | 2 | 4 | 0 | 3 | 4 |
| Bangluru | 3 | 5 | 1 | 7 | 7 |
| Bellary | 3 | 6 | 0 | 1 | 1 |
| Chennai | 2 | 2 | 2 | 1 | 1 |
| Southern Zone | 8 | 13 | 3 | 9 | 9 |
| Bilaspur | 2 | 2 | 0 | 8 | 8 |
| Nagpur I | 3 | 4 | 1 | 5 | 5 |
| Western Zone | 5 | 6 | 1 | 13 | 13 |
| ALL INDIA | 39 | 50 | 10 | 37 | 38 |

STATEMENT 3.6

Number of fatal accidents in non-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 |
|------------------------------------|---|---|---|---|---|---|---|----|---|-------|
| Management | 2 | 0 | 1 | 0 | 1 | 0 | 1 | 8 | 1 | 14 |
| Management & Sub. Sup. Staff(SSS) | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 1 | 6 |
| Management, SSS & Coworker | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Management & Coworker | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Management & Deceased | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 3 |
| Subordinate Supervisory Staff(SSS) | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 |
| Sub. Sup. Staff & Coworker | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Sub. Sup. Staff & Deceased | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| Coworker | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 6 |
| Deceased | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 |
| Total | 6 | 1 | 8 | 1 | 3 | 0 | 1 | 14 | 5 | 39 |

STATEMENT 3.7**Summary of Findings of Fatal Accidents in Non-Coal mines during the year 2016**

 Code : 0100 Ground Movement

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

1. Date - 21.03.16 Mine - DADAM STONE MINE
 Time - 10.05 Owner - M/S HSIIDC LTD.
 Dist. - Bhiwani, State - Haryana
 Person(s) Killed :
 1. Bablu Baitha,Helper, Male, 22 Years

While a driller along with his helper and a mechanic were operating a drill machine deployed at the bottom bench of a stone quarry beside a 36m high high-wall, a boulder measuring about 0.73m x 0.62m x 0.52m rolled down the slope of high-wall from a height of about 20m, inflicting serious bodily injuries to the helper who died almost instantly. The driller sustained serious injuries and the mechanic escaped with minor injuries.

Had,

the sides of the opencast working been kept benched, sloped and secured whilst working the mine to prevent danger from all of sides in accordance with the provisions of Regulation 106 of the Metaliferous Mines Regulations 1961 and condition of the work place been ascertained before deploying workmen near high bench.

this accident could have been averted.

2. Date - 08.05.16 Mine - CHANDRUPALLI DOLOMITE & STEATITE MINE
 Time - 15.30 Owner - G. LAKSHMINAAYANA
 Dist. - Kurnool, State - Andhra Pradesh
 Person(s) Killed :
 1. K.Ramakka,woeker, Female, 50 Years
 2. P.Narayanamma,worker, Female, 48 Years
 3. Boya Lakshmi,worker, Female, 19 Years

While a group of five workers, including three female workers, were engaged for extraction of mineral with crowbar, shovels and baskets at the bottom of a 6-7m high bench of morum with visible planes of weakness in an opencast mine, suddenly a mass of morum of about 10 tones slid from side of bench along planes of weakness and fell over three female workers thus completely burying them and inflecting serious bodily injuries to which two of them died on the spot and one person succumbed to injuries on way to hospital.

Had,

i) the side of the opencast workings been adequately benched, slopped and secured so as to prevent danger from fall of sides; and

ii) the opencast workings been placed under the charge of a mining mate or other competent person; and

iii) daily personal supervision exercised by manager to ensure safety of mine and the persons employed therein and all work in the mine was carried out in accordance with the provisions of the Act and of the Regulations and Order made thereunder; and

iv) fencing been erected and maintained to prevent entry of person into opencast workings which was dangerous for employment of persons

as required under the provisions of Regulation 106(1)(a), Regulation 116(1) read with Regulation 39(1), Regulation 44(1)(a) & 44(9), Regulation 115(2) of the Metalliferous Mines Regulation, 1961 read with section 18(4) of the Mines Act, 1952

this accident could have been averted.

3. Date - 01.06.16
Time - 3.30
Mine - ANDHRA PRADESH GRANITE (MIDWEST) MINE
Owner - ANDHRA PRADESH GRANITE (MIDWEST) PVT. LTD.
Dist. - Prakasham, State - Andhra Pradesh
Person(s) Killed :
1. Kipu Anji Reddy, supervisor, Male, 29 Years

While a workman was standing at the top edge of a bench of an opencast mine, suddenly a portion of the bench measuring 4.0m x 2.2m x 4.6m (height) collapsed as a wedge along a hidden joint plane and the workmen standing over it fell down from a height of about 6.23m, was hit by broken pieces and died while being taken to the hospital.

Had,

the deceased carelessly and negligently not stood close to the top edge of the bench at the mine thereby endangering his own life as required under Reg.181 r.w. Reg.41(1) of Metalliferous mines Regulations 1961

and the shift foreman had carefully examined the face and not failed to detect the joint planes as required under Reg.46(2)(b) r.w. condition No. 6.4 & 21.4 of Permission letter no:H1/Perm-106/NRL/08/344 Dated 12-02-2009,

this accident could have been averted.

4. Date - 10.08.16
Time - 23.50
Mine - ANDHRA PRADESH GRANITE (MIDWEST) MINE
Owner - ANDHRA PRADESH GRANITE (MIDWEST) PVT. LTD.
Dist. - Prakasham, State - Andhra Pradesh
Person(s) Killed :
1. Gobar Niranjan, Helper, Male, 35 Years

While a workman was standing between two gang saw sized mineral blocks at a bench of an opencast mine, suddenly a side of the block measuring about 3.4m x 1.3m x 0.35m parted due to chemical expansive splitting and the workmen was hit and pressed between the split side and the adjacent block and received grievous injuries to which he succumbed instantly.

Had,

the previous shift foreman and the shift foreman negligently not failed to ensure that the side of the block for splitting was adequately supported by block of adequate size to prevent the accidental fall of the split side and the area was kept suitably fenced to prevent inadvertent entry as required under reg. 181 r.w reg. 46(2)(b)&(7) of Metalliferous Mines regulations 1961,

this accident could have been averted.

5. Date - 04.09.16
Time - 19.45
Mine - KRISHNASAI GRANITES 2
Owner - SIDDA VENKATESWARA RAO
Dist. - Prakasham, State - Andhra Pradesh
Person(s) Killed :
1. P.Pradhan, Helper, Male, 18 Years

While a workman was placing water jet pipe in the wire saw bottom cutting site at a bench of an opencast mine, suddenly a portion of the face measuring about 4.0m x 3.0m x 0.3m parted along a joint plane and fell over and hit the workmen who received grievous injuries to which he succumbed while being taken to the hospital.

Had,

i) the shift foreman not failed to carefully examine the face, detect the joint plane and allow the helper to place the water jet pipe while the wire saw bottom cutting was in operation as required under Reg.46(2) (b) r.w condition No. 6.4, 20.3(e) & 26.4 of the permission letter No:HR2/SCZ/106(2) (b)/102(15)/2015/4867 dated: 15-10-2016 granted under reg.106(2) (b) of Metalliferous Mines Regulation 1961,

ii) the mine mate in the shift not failed to carefully examine the face, detect the joint plane and allow the helper to place the water jet pipe while the wire saw bottom cutting in operation as required under reg.47(1) (b) r.w condition No.6.4, 20.3(e) of the permission letter No:HR2/SCZ/106(2) (b)/102(15)/2015/4867 dated 15-10-2016 granted under reg.106(2) (b) of Metalliferous Mines Regulation 1961

this accident could have been averted.

6. Date - 27.10.16
Time - 7.00

Mine - DHANLAXMI STONE MINE
Owner - BISHANU KUMAR KHATOR
Dist. - Koderma, State - Jharkhand
Person(s) Killed :

1. Chotu Ravi Das, Excav. Optr., Male, 26 Years
2. Surender Yadav, Munshi, Male, 50 Years

While an excavator was removing the blasted stone from 10m-11m high soft and hard stone layered side in an opencast stone quarry, a portion of side measuring 21m x 15m x 5m thick suddenly collapsed from a height of 10-11m and fell on the excavator as well on the Munshi standing nearby, inflicting fatal injuries on both excavator operator and Munshi.

Had,

the mining operations been conducted in accordance with the provisions of the Regulations by getting the working face inspected by Mining Mate as well as by manager before permitting the work persons to lift the blasted muck at the tow of high soft and hard stone layered vertical side as required under with Reg.116(3) (b) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

Code : 0200 Transportation Machinery (Winding)

Code : 0224 Falls of Objects from Cages, Skip etc.
(1 Death)

7. Date - 10.02.16
Time - 8.00

Mine - ISOLATED OIL MINE DRILLING
Owner - OIL & NATURAL GAS CORPORATION LTD.
Dist. - Jorhat, State - Assam
Person(s) Killed :

1. Promud Sonowal, Crane Slinger, Male, 21 Years

While pulling out a sling wrapped over two drill pipes placed on pipe-racks in a drill rig of a oil mine, one of the drill pipe rolled over catwalk from pipe-racks, to which a crane slinger standing on catwalk was caught under the rolling pipe and fell down on the ground from catwalk along with drill pipe, and sustained serious bodily injuries, which proved fatal on the way to hospital.

Had,

1) the safe practices been followed during crane operations, thereby negligently not endangering the life of persons over the catwalk, by contravening the provisions of Regulation 98 of the Oil Mines Regulations, 1984;

2) the presence of slinger out of danger zone on catwalk and avoiding formation of second layering on pipe-racks been ensured, thereby negligently not omitted to ensure safety of persons employed therein, by contravening the provisions of Regulation 18(1) and Regulation 98 of the Oil Mines Regulations, 1984;

this accident could have been averted.

Code : 0300 Transportation Machinery (Non-Winding)

Code : 0335 Dumpers
 (4 Deaths)

8. Date - 25.04.16 Mine - SAHGAON LIMESTONE MINE
 Time - 11.00 Owner - S.N. AGARWAL
 Dist. - Durg, State - Chhattisgarh
 Person(s) Killed :
 1. Jhanku Yadav, Driver, Male, 38 Years

While a loaded tipper was being driven on a ramp having up gradient of 1 in 16, in a limestone opencast mine, driver, somehow lost control, vehicle rolled back, fell down to lower bench from a height of about 4m and thrown out of the cabin, inflicting serious bodily injuries to which, he died almost instantaneously.

Had,

i) the tipper been driven carefully on a ramp having up gradient thus not omitted to do anything necessary for the safety of persons as required under Regulation 181 of the Metalliferous Mines Regulations 1961;

ii) the adequate berm been provided along ramp to prevent falling of the uncontrolled vehicle to lower bench as required under Regulation 106 of the Metalliferous Mines Regulation 1961 also read with DGMS cir. Tech. No. 11/1973;

iii) the tipper been allowed in the mine after ascertaining its roadworthiness by a competent person, along with the driver possessing valid driving licence and vocationally trained as required under Regulation Reg. 106 read with DGMS Tech. Cir. no. 11 of 1973 and, as required Rule 6 of the Mine Vocational Training Rules, 1966 respectively.

this accident could have been averted.

9. Date - 10.05.16 Mine - A NARRAIN MINE
 Time - 6.15 Owner - M/S VEDANTA LTD.
 Dist. - Chitradurga, State - Karnataka
 Person(s) Killed :
 1. Raghavendra V.K., Dumper optr., Male, 34 Years

While a dumper driver was walking in parking yard of a mine, he came in line of a dumper being reversed from his back side which hit and run him over as a result of which he died instantly.

Had,

the person of the reversing dumper ensured that he had a clear view of the area behind the dumper before reversing his dumper and thus not negligently endangered the life of a person as required under Regulation 106(2)(b) of the Metalliferous Mines Regulations,

1961 read with condition no. 9.5 of the permission letter no. D/A3/11189 dated 22.12.1993 and Regulation 181 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

| | | |
|-----|---------------------------------|--|
| 10. | Date - 02.09.16 Time - 11.15 | Mine - DALLI IRON ORE MINE COMPLEX Owner - BHILAI STEEL PLANT {SAIL} Dist. - Durg, State - Chhattisgarh Person(s) Killed : 1. Sant Ram, Tipper optr., Male, 45 Years |
|-----|---------------------------------|--|

While an empty tipper parked at the yard near attendance room of an iron ore opencast mine was started and moved forward to proceed towards the allocated workplace, a motorcyclist suddenly appeared from driver's side in front of the moving tipper, as a result he was dashed by the front right wheel of the tipper, inflicting serious bodily injuries to which he succumbed on way to hospital.

Had,

i) the bike (restricted vehicle) not been used in the mine premises where truck/tippers are operated, thus not negligently endangered life of persons, as required under regulations 41(1), 41(4b), 181, 106(2)(b) of the MMR, 1961 read with para 20.2c of annexure-I attached with permission letter no. 3840 dated 24.10.02 and code of practice framed by the manager;

ii) the tipper not been moved forward without ensuring that no one come inadvertently in front of his tipper, thus not negligently endangered the life of a co-worker, as required under regulation 106(2)(b) read with para 21.3d of annexure-I attached with permission letter no. 3840 dated 24.10.02 and reg. 181 of the metalliferous mines regulations, 1961 and code of practice framed by the manager;

iii) the code of traffic rules under regulation 106(2)(b) read with para 23.0 of annexure-I attached with permission letter no. 3840 dated 24.10.02 been properly implemented, to stop the entry of unauthorized vehicles within the mine premises.

This accident could have been averted.

| | | |
|-----|--------------------------------|---|
| 11. | Date - 21.10.16 Time - 6.30 | Mine - TILAKHERA L/STONE MINE Owner - J. K. CEMENT WORKS Dist. - Chittorgarh, State - Rajasthan Person(s) Killed : 1. Madan Lal Dangi, Tipper, Male, 28 Years |
|-----|--------------------------------|---|

While a tipper driver was standing in front of another tipper near loading point, he was hit and run over when the tipper started moving towards the loading machine to receive serious internal injuries to which he succumbed whilst on way to hospital after being given preliminary treatment at the mine's dispensary.

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 28.0 (C) (2) (b) of Directorates letter No. 4193 dated 03.09.2007, granting relaxation from the provisions of regulation 106(2)(b) of the metalliferous mines regulations, 1961, and

ii) None ventured in close proximity of the tipper which was likely to move, thus not negligently endangering his own life and safety, as called for by the provisions of regulation 181 of the metalliferous mines regulations, 1961,

this accident could have been averted.

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

12. Date - 17.01.16
Time - 15.40

Mine - G.F.S.R. BLOCK I & II MANGANESE MINE
Owner - J. K. MINERALS
Dist. - Balaghat, State - Madhya Pradesh
Person(s) Killed :

1. Prakash Hirkane, Field Attendent, Male, 36 Years

While a loading supervisor was walking on a surface transportation road in an underground Manganese mine, he was hit and run over by a loaded truck inflicting serious bodily injuries to him to which he succumbed while being shifted in the hospital.

Had,

the truck been driven defensibly thus not negligently endangered life of a person employed in the mine and not omitted to ensure safety of person as required under the provision of Reg.181 of the Metalliferous Mines Regulations 1961;

this accident could have been averted.

13. Date - 06.02.16
Time - 13.45

Mine - RISHABH STONE QUARRY
Owner - SURESH JHANJHRI
Dist. - Giridih, State - Jharkhand
Person(s) Killed :

1. Rajendra, Driller helper, Male, 35 Years

While an empty truck was going up on an elevated haul road having 1 in 12 gradient in a stone quarry, it suddenly fell off the road on two drillers working by the side of that haul road through a length of 0.4m, burying one of them to death and inflicting serious injuries on the other.

Had,

a berm of height not less than the diameter of tyre of the largest vehicle plying on road, with 1m width at top and 2.5 width at bottom, been provided, along the edge of the haul road, as required under DGMS tech circular no. 09/2008, read with notice issued under section 22A(1) of the Mines Act 1952, vide this Directorate letter no. KR/2568, dated 13.10.2015,

this accident could have been averted.

14. Date - 25.05.16
Time - 12.30

Mine - GOLDEN GRANITES
Owner - M/S GOLDEN GRANITE
Dist. - Prakasham, State - Andhra Pradesh
Person(s) Killed :

1. Bandaru Kasi, Helper, Male, 22 Years

While a workman was sitting adjacent to the Operator of a Dumper converted into Water Tanker moving up the haul road, suddenly the engine of the dumper stopped and the tanker rolled back, hit the berm and over turned. The workmen fell down, got trapped under the canopy and died while on the way to hospital.

Had,

The dumper been maintained properly and the worn out tyres were not used which failed to provide the necessary grip for braking as required under condition 13.4(d) of the Permission letter no. H1/perm-106/NRL/08/439 Dated: 23.02.2009 granted under Reg. 106(2) (b) of Metalliferous Mines Regulation 1961,

this accident could have been averted.

15. Date - 17.08.16
Time - 11.10

Mine - KAMMATHUR IRON ORE MINE
Owner - SANDUR MANGANESE & IRON ORE LTD.
Dist. - Bellary, State - Karnataka
Person(s) Killed :

1. Manjanna, Tipper Helper, Male, 41 Years

While empty water tanker was reversing to position for filling of water with a helper sitting on top rear side of tanker, he slipped and fell down on the ground and run over by reversing tanker beneath rear wheel causing multiple crush injury which proved fatal.

Had,

the water tanker driver not allowed his helper to remain on top of tanker while it was in motion and not driven tanker negligently thus not ensured safety of helper, as required under the provisions of regulation 181 read with condition no. 13.1 of permission letter no. BLR-BL/IO-30/P-106/2013/2399, dated 12.07.2013 granted under provisions of regulation 106(2) (b) of the metalliferous mines regulations, 1961

this accident could have been averted.

Code : 0400 Machinery Other than Transp. Machinery

Code : 0448 Other Heavy Earth Moving Machinery
(1 Death)

16. Date - 19.01.16
Time - 9.20

Mine - MALANJKHAND COPPER MINE
Owner - HINDUSTAN COPPER LTD.
Dist. - Balaghat, State - Madhya Pradesh
Person(s) Killed :

1. Rekham, Jr. Crane Operator, Male, 55 Years

While a crane was being driven down the gradient on a ramp having 1 in 13.3 gradient, in an opencast metalliferous mine, the crane operator lost control, resulting in over speeding, skidding and jumping of crane which eventually hit against the highwall side and toppled inflicting serious injuries to the operator to which he succumbed on way to hospital, whereas the helper escaped with minor injuries.

Had,

the crane been driven defensibly on four wheel drive while driving down the gradient with normal speed, crane function switch been kept in off position and parking brake not been applied in running condition as per the prescribed 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 Reg. 181 of the Metalliferous Mines Regulation 1961,

this accident could have been averted.

Code : 0500 Explosives

Code : 0554 Other Projectiles
(2 Deaths)

17. Date - 28.09.16
Time - 13.45

Mine - BANDARGAL GRANITE QUARRY
Owner - SHRI SOMASHEKARAI AH V. KATAPUMATH
Dist. - Koppal, State - Karnataka
Person(s) Killed :
1. Parasuram Pawar, Worker, Male, 38 Years
2. Amresh Pawar, Worker, Male, 28 Years

While six shot holes of 32mm in diameter were charged with gun powder and fired electrically by unqualified supervisor in a granite stone quarry, few fly rock projectiles hit two workmen engaged in drilling at a distance of 10m inflicting serious bodily injuries to both of them to which they succumbed on way to hospital.

Had,

before a shot is charged, stemmed and fired ensured that all persons have taken proper shelter as required under the provisions of Regulation 164(1) of the Metalliferous Mines Regulations, 1961,

a duly qualified blaster been appointed in the mine to perform the duties of blaster as required under the provision of Regulation 39(1) read with Regulation 160 of the Metalliferous Mines Regulation, 1961 and

a duly qualified manager been appointed for overall management, control, supervision and direction of the mine as required under provisions of Section 18(4), Section 17 of the Mines Act, 1952 read with Regulation 34(1) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

Code : 0559 Other Explosive Accidents
(5 Deaths)

18. Date - 26.02.16
Time - 10.55

Mine - MILLI MARKUNDI STONE MINE (ARAJI NO.4949)
Owner - M/S SHAKTI STONE WORKS
Dist. - Sonbhadra, State - Uttar Pradesh
Person(s) Killed :
1. Deo Nath, Labour, Male, 36 Years
2. Sant Lal, Labour, Male, 40 Years
3. Hansh Lal, Labour, Male, 50 Years

While loading of blasted stone by a gang of 13 contractual workers was in progress adjacent to a round of charged & stemmed shot-holes in a stone quarry, some of the charged holes exploded prematurely due to local strike of lightening, and the resulting fly rock inflicted fatal injuries to one person, serious bodily injuries to 6 persons and minor injuries to remaining 6 persons. Two of the seriously injured persons succumbed to their injuries whilst undergoing treatment at the hospital.

Had,

i) All persons in the vicinity (other than the blaster and his assistants) been removed and allowed to take proper shelter before shot-holes were charged and stemmed, as required by the provisions of Regulation 164(1) of the Metalliferous Mines Regulations 1961, read with DGMS circular No. Tech. 7 of 2001,

ii) Detonators having adequate length of properly insulated leads (commensurate with the depth of shot-holes) been used so that all connections in the round of shot-holes were properly made as required by the provisions of Regulation 163(4)(a) of the Metalliferous Mines Regulations 1961, and,

iii) During approach of a storm, all naked and exposed wires been coiled up and covered so as to prevent the charged holes from exploding prematurely by a local strike of the lightning, thus not negligently endangering life and safety of persons employed in the mine as required by the provisions of Regulation 181 of the Metalliferous Mines Regulations, 1961, read with Clause 8.2 of DGMS circular No. 36 of 1972, and DGMS circular no. Tech. 10 of 1995.

this accident could have been averted.

19. Date - 27.06.16
Time - 16.30

Mine - SALAIGODHNI STONE MINE (KHASRA NO 210/2)
Owner - M/S PAWAN PUTRA BUILDCON PVT. LTD.
Dist. - Nagpur, State - Maharashtra
Person(s) Killed :

1. Reajesh K.Thakre, supervisor, Male, 44 Years
2. M.S.Waghade, Blaster helper, Male, 28 Years

While shot holes were being charged in an opencast stone quarry, suddenly electric storm started and lightning struck and caused premature blasting of charged shot holes inflicting fatal injuries to two persons and serious bodily injury to one person.

Had,

i) during approach of an electric storm, all naked and exposed lead wires of detonators been coiled up in the mouth of shot holes or covered up by non conduction material, so as to prevent premature explosion of the charged by strike of lightning, thus not negligently endangering the life and safety of persons employed in the mine as required under the Regulation 181 of the Metalliferous Mines Regulations, 1961 read with DGMS (Technical) circular no. 1 of 1995,

ii) a manager possessing qualification as prescribed in the Regulation 34 of the Metalliferous Mines Regulations 1961 was kept in charge of the mine.

iii) preparation of charges, charging and stemming of holes in the mine was done by persons holding Manager's, foreman's Mate's or blaster's certificate as required under the Regulations 160(2) of the Metalliferous Mines Regulations 1961.

this accident could have been avoided.

Code : 0700 Dust, Gas, & Other Combustible Material

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

20. Date - 24.09.16
Time - 18.15

Mine - RDS-GLK WORK OVER OIL MINE
Owner - OIL & NATURAL GAS CORPORATION LTD.
Dist. - Sibsagar, State - Assam
Person(s) Killed :

1. Pranjali Gogoi, Contract worker, Male, 36 Years

While a contractual worker was going towards a suction tank used for well acidizing job for checking fluid level, he fell unconscious and clutched at the railing about 12m distance from the return tank and was rushed to hospital where he was declared by doctors as brought dead.

Had,

i) the acidizing operation been done carefully by not endangering the life of persons employed therein, as required under Regulations 16(1), 16(2), 19(1), 19(2), 19(3), 52, 89 & 94 of OMR'84

ii) the use of personal protective equipment been ensured as required under Reg. 52(4), 89, 94 of OMR'84 and

iii) safe operating procedures been enforced for safe operation of acidizing work, thus negligently omitting to do what was necessary for the life and safety of persons employed in such operations as required under Regulations 20, 52, & 94 of OMR, 1984.

this accident could have been averted.

Code : 0800 Falls (Other than Falls of Ground)

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

21. Date - 19.01.16 Mine - MASARO KI OBERI SERPENTINE MINE ML202/08
Time - 11.00 Owner - SIDHARTHA MARBLE & GRANITE
Dist. - Udaipur, State - Rajasthan
Person(s) Killed :
1. Laxman Meena, Worker, Male, 30 Years

While a worker was engaged in handling of overburden by excavator in the topmost bench of the mine in the south west portion of the mine, the portion of the ground underneath the excavator collapsed and thereby the excavator fell from the topmost bench (1st bench) to the third bench of the mine, the worker operating the excavator jumped from the excavator onto the second bench and received head injury to which he succumbed on the way to hospital.

Had,

i) it been ensured that sides were adequately benched, sloped and secured so as to prevent danger from fall of sides as required under the provisions of Regulation 106(3) of the Metalliferous Mines Regulations, 1961 and Regulation 44(9) read with Section 18(4) of Mines Act, 1952,

ii) the person adhered to the advice of his superior & co-worker thus not negligently committing unsafe act, by overstepping his work area leading to fall of excavator to the lower bench, thereby omitting to ensure his own safety as required under Regulation 181 of the Metalliferous Mines Regulations, 1961.

this accident could have been averted.

22. Date - 01.03.16 Mine - ZAWAR WORKSHOP GALENA
Time - 17.30 Owner - HINDUSTAN ZINC LTD.
Dist. - Udaipur, State - Rajasthan
Person(s) Killed :
1. Meetha Lal, Temp. Worker, Male, 27 Years

While a contractor worker was coming down from roof of the HEMM workshop (under construction) at Baroi after sheeting work at the end of shift, he stepped over the partially anchored fibre skylight sheet which got buckled, thus he lost his balance and fell to the ground through a height of about 9m, receiving serious injury to which he succumbed on way to the hospital.

Had,

i) the person anchored his double harness safety belt with life line provided for the purpose at the roof while coming down as required under the provisions of Regulation 182 C read with Regulation 41(1)(a) of the Metalliferous Mines Regulations, 1961;

ii) the Mine Vocational Training been imparted to the contractor's worker before engaging him on work as required under Rule 6(1) of Mine Vocational Training Rules, 1966;

iii) the proper supervision been ensured while laying the GI sheet over the roof of HEMM Workshop (under construction) as required under the provisions of Regulation 39(1)(a) of the Metalliferous Mines Regulations, 1961; and

iv) the full anchoring of sky light sheet been ensured, on which the person stepped over and also the safety net been provided below the sheets (roof) under anchoring thus not negligently omitting to ensure the safety and life of work persons as required under the provisions of Regulation 181 read with Regulation 42 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

| | |
|---------------------|--|
| 23. Date - 10.04.16 | Mine - VINAYAGA STONE QUARRY |
| Time - 17.00 | Owner - M. SARAVANA GANESAN |
| | Dist. - Virudhnagar, State - Tamil Nadu |
| | Person(s) Killed : |
| | 1. Jayapandi, G. Mazdoor, Male, 38 Years |

While three mazdoors on weekly day of rest were trying to get down from 2nd bench to the bottom of the quarry, along the slope of the bench to take bath, during which a thunder storm occurred and one of them slipped along the slope and fell down to a depth of 6m, the other two persons tried to save him also fell down inflicting serious injuries to three of them, out of which one succumbed to his injuries later.

Had,

i) the persons tried to enter the mine unauthorisedly and trying to get down from the 2nd bench to bottom of the quarry, thus negligently and willfully endangering their own lives as required under Regulation 181 of the Metalliferous Mines Regulations, 1961,

ii) top of opencast working was kept securely fenced so as to prevent inadvertent entry of persons into the mine as required under Regulation 115 of the Metalliferous Mines Regulations, 1961, and

iii) a duly qualified manager been appointed for overall management, supervision, direction and control of the mine, as required under Regulation 34 of the Metalliferous Mines Regulations, 1961 read with Section 17 of the Mines Act, 1952,

this accident could have been averted.

| | |
|---------------------|---|
| 24. Date - 22.06.16 | Mine - PANDAPULI LIMESTONE MINE |
| Time - 9.30 | Owner - SHRI S. A. MURALI |
| | Dist. - Tirunelveli, State - Tamil Nadu |
| | Person(s) Killed : |
| | 1. Velmurugan, Worker, Male, 48 Years |

While a person was trying to climb into the bucket attached to a winch to proceed down into the pit, he slipped and fell down to a depth of about 18m inflicting serious bodily injuries due to which he succumbed.

Had,

i) the mine been worked properly by forming benches and adequately sloped as required under regulation 106(2) & (3) of the Metalliferous Mines Regulations, 1961,

ii) the manager of the mine been personally supervised the job and given proper direction to ensure safety of the persons in every respect before engaging the persons at work as required under Regulation 44(1) of the Metalliferous Mines Regulations, 1961,

iii) the system of access into the pit where inclination was more the 60 degree being provided with proper ladder, hand rail and platform as required under Regulation 96(2)(d) of Metalliferous Mines Regulations, 1961

iv) proper safety appliances such as safety belt, safety guard rails etc. been provided as required under Regulation 114(2) and 118(4) of the Metalliferous Mines Regulations, 1961, and

v) the mining mate been appointed and workings placed under the charge of mining mate as required under Regulation 39 read with Regulation 116 of the Metalliferous Mines Regulations, 1961

this accident could have been averted.

25. Date - 07.07.16
Time - 12.30

Mine - KONDAYAMPATTI ROUGH STONE MINE

Owner - SHRI B. SEKAR

Dist. - Madurai, State - Tamil Nadu

Person(s) Killed :

1. Senthil, Gen.Mazdoor, Male, 30 Years
2. Nallaiyan, Gen.Mazdoor, Male, 45 Years
3. Muthu Ramalingam, Gen.Mazdoor, Male, 45 Years

While three general mazdoors were drilling holes at height by hanging themselves with the help of rope tied to their waist in a quarry, loose debris and boulders slid from top and side and hit them, due to which the rope which they tied in their waist was broken and all the three persons fell down along with debris from a height of about 60m inflicting serious injuries to which they succumbed.

Had,

i) the mine being worked properly by forming benches and adequately sloped, as required under regulation 106 of the metalliferous mines regulations, 1961,

ii) the loose mud/debris/stones being removed within a distance of 3m from the edge or side of the excavation as required under regulation 106(4) of the metalliferous mines regulations, 1961,

iii) a dully qualified manager being appointed for overall management, supervision, direction and control of the mine as required under regulation 34 of the metalliferous mines regulations, 1961, read with section 17 of the mines act, 1950.

iv) the mining mate being appointed and workings placed under the charge of mining mate as required under regulation 39 read wiht regulation 116 of the metalliferous mines regulations, 1961

this accident could have been averted.

26. Date - 13.10.16
Time - 14.00

Mine - SATALKHERI LIMESTONE MINE

Owner - ASSOCIATED STONE INDUSTRIES (KOTA) LTD.

Dist. - Kota, State - Rajasthan

Person(s) Killed :

1. Geeta Bai, Contract Worker, Female, 43 Years

While a female contractor's worker was carrying head load of a kota-stone slab, measuring about 600mm x 600mm x 35mm (thickness) in size at production bench of an open cast mine for loading it into a truck, she fell down with the slab and received serious head injury due to heavy head load falling onto her, to which she succumbed on the way to hospital after about 8 hours.

Had,

it been ensured that none was allowed to work in the mine unless wearing a helmet, as to prevent head injury in the event of accidental fall whilst carrying heavy head loads, as required by the provisions of Regulation 182A(1) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

27. Date - 19.10.16

Mine - VITHAL DEO DOLOMITE & MARBLE MINE

Time - 8.30

Owner - SUPRIM MARBLE AND GRANITE MINE

Dist. - Banswara, State - Rajasthan

Person(s) Killed :

1. Gulab, General Mazdoor, Male, 53 Years

While a general mazdoor was standing on the top edge of a marble block measuring 3.6m (length) x 2.4m (width) x 3.0m (height) (approximately), which had already been separated from mother rock by giving a bottom cut, and was fitting wire saw machine kept on it for giving last vertical cut, a portion of the marble block measuring 1.5m (length) x 2.0m (width) x 3.0m (height) got dislodged along a slip plane and slid down along with the mazdoor, who received serious bodily injuries due to fall as well as due to the sliding rock-mass. He succumbed to his injuries whilst undergoing treatment at the hospital.

Had,

the mazdoor not been deployed on the top edge of the marble block which had already been separated from the mother rock by giving it a bottom cut thus making the block unstable, and the operations of setting up of the wire saw machine been personally supervised by the manager/duly qualified supervisor, thus not required by the provisions of Regulation 181 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

28. Date - 26.10.16

Time - 16.00

Mine - ORISSA SAND COMPLEX MINE

Owner - INDIAN RARE EARTHS LTD.

Dist. - Ganjam, State - Orissa

Person(s) Killed :

1. Debraj Pradhan, Cont. Worker, Male, 48 Years

While a person was painting the steel structure of the roof of the facility, he suddenly slipped and fell down on the floor, from a height of 7.55 m sustaining grievous injuries due to which he succumbed after about three hours.

Had,

suitable protective equipment and safety appliances been provided and used while at work, thus not negligently omitting to do anything for the safety of persons employed as required by the provisions of Regulations 182(B) and 181, read with Reg. 42, 53 and 36 of Metalliferous Mines Regulations, 1961,

the accident could have been averted.

29. Date - 28.11.16

Time - 7.10

Mine - CBM BLOCK-RG(EAST)-CBM-2001/1

Owner - ESSAR OIL LIMITED

Dist. - Burdwan, State - West Bengal

Person(s) Killed :

1. Rohan S. Afonso, Elect. Technician, Male, 27 Years

While a person was getting down from a trailer at a height of 1.5m from the ground level through an iron staircase at an well pad site of an Oil mine, the staircase slipped and he fell down over the staircase and inflicted with internal injuries to which he succumbed after six days in hospital.

Had,

the person not negligently omitted to check the anchorage of the staircase with the trailer before using it as required under Regulation 98 of the Oil Mines Regulations, 1984

this accident could have been averted.

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

30. Date - 15.02.16 Mine - BAIKORI SOAP STONE MINE
Time - 16.30 Owner - SHRI PUSHKAR CHAND PATHAK
Dist. - Bageshwer, State - Uttaranchal
Person(s) Killed :
1. Lal B.Dowal, Mazdoor, Male, 45 Years

While a miner was engaged in mining of soapstone at the floor of the opencast mine, a boulder measuring about 1.2m x 1.0m x 0.8m, inadvertently slipped about 4m down the slope of debris on the footfall side and smashed his head against the high wall, killing him almost instantaneously.

Had,

the loose stone/boulder were not allowed to remain within 3m of the edge or on side wall of excavation/slope in accordance with the provisions of Regulation 106(4) of the Metalliferous Mines Regulations, 1961

this accident could have been averted.

31. Date - 28.02.16 Mine - CBM PROJECT OF GEECL GAS MINE
Time - 10.00 Owner - GREAT EASTERN ENERGY CORP. LTD.
Dist. - Birbhum, State - West Bengal
Person(s) Killed :
1. Lakhan Bauri, Helper, Male, 28 Years

While positioning the elevator over a drill pipe in a drilling rig of an Oil mine (CBM), the casing hoist wire line snapped, thereby allowing free fall of the 'J' hook connected with it and hitting a person on the working platform, thus sustaining serious forehead injuries to him, which proved fatal on the way to hospital within two hours.

Had,

i) the casing hoist wire line not been over pulled during positioning of the elevator over drill pipe, thereby not negligently omitted to ensure safety of persons employed therein, by contravening the provisions of Regulation 98 of the oil mines Regulations, 1984;

ii) the casing hoist wire line been examined thoroughly before putting into use after an idle period of 2 years, thereby not negligently omitted to ensure proper maintenance of equipments used therein as required under the provisions of Regulation 76 of the Oil Mines Regulations, 1984;

this accident could have been averted.

32. Date - 04.04.16 Mine - WORK OVER MINE, ANKELESWAR
Time - 2.00 Owner - OIL & NATURAL GAS CORPORATION LTD.
Dist. - Bharuch, State - Gujarat
Person(s) Killed :
1. Malek Tasvwar Hussain, Cont. Electric, Male, 27
Years

While pulling out operation of tubings in a workover gas and oil well carried out with a workover rig, suddenly the 'Travelling Block' severely collided with the 'Crown Block' of the work over rig due to over winding resulting in breaking of casing line in which 'Travelling Block' fell down from height killing an electrician instantly and causing serious bodily injuries to a rigman, both working on the derrick,

Had,

i) the automatic device provided with draw work not bypassed, so as to effectively prevent the 'Travelling Block', coming closer than 2m of the 'Crown Block', thus, willfully endangered the safety of the mine and of the persons employed therein, as required under Regulation 32(4) read with Regulation 98 of the Oil Mine Regulation, 1984 and

ii) work over rig placed under a competent person in night shift for adequate and thorough inspection of installation and equipment thereof and for carrying out constant supervision of the operations being carried out at the installation, as required under the provisions of Regulation 16(1) read with Regulation 81(1) of the Oil Mine Regulation, 1984,

this accident could have been averted.

33. Date - 21.11.16
Time - 13.30

Mine - WORKOVER
Owner - OIL INDIA LTD.
Dist. - Dibrugarh, State - Assam
Person(s) Killed :
1. Shanglang Yanchang, Topman, Male, 53 Years

While rig mast up job in a workover oil mine was being done, a person fixing the joint bolts sitting on the Y-type bracket was hit by the falling elevator link of the travelling block, thus sustaining internal bodily injuries, which proved fatal during medical treatment at hospital.

Had,

i) laid down safe operating procedures been followed and stipulated points in check list been examined thoroughly before raising the mast, thereby negligently not omitted to ensure safety of persons employed therein, by contravening the provisions of Regulation 20(3) and 98 of the Oil Mines Regulations, 1984;

ii) proper provisions been made to lock the brake lever of the draw works rigidly before raising the mast, thereby negligently not omitting to ensure safety of persons employed therein, by contravening the provisions of Regulation 18(2) and 98 of the Oil Mines Regulations, 1984;

this accident could have been averted.

Code : 0889 Other Accidents due to Falls
(1 Death)

34. Date - 11.01.16
Time - 1.30

Mine - CBM BLOCK-RG(EAST)-CBM-2001/1
Owner - ESSAR OIL LIMITED
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. Dhiraj Kr.Choubey, Male, 23 Years

While releasing the torque in a string of sucker rods by using make-up wrench during its manual back-off process for work-over operations in a gas well, the back-up wrench got slipped, allowing clockwise rotation of make-up wrench which hit a person holding the same, inflicted serious bodily injuries, that proved fatal on the way to hospital.

Had,

i) the make-up wrench been held firmly, thereby negligently not omitted to ensure safety of persons employed therein, by contravening the provisions Regulation 18(4) and 98 of the Oil Mines Regulations, 1984;

ii) the proper provisions been made in order to prevent the free rotation of make-up wrench in the event of slippage of back-up wrench, thereby negligently not omitting to

ensure safety of persons employed therein, by contravening the provisions Regulation 18(3) and 98 of the Oil Mines Regulations, 1984;

iii) the risk involved been properly assessed in the manual back-off operation by the supervisors, thus negligently not omitted to ensure safety of persons employed therein, by contravening the provisions Regulation 18(1) and 98 of the Oil Mines Regulations, 1984;

this accident could have been averted.

Code : 0900 Other Causes

Code : 0991 Irruption of Water
 (3 Deaths)

35. Date - 28.05.16 Mine - TURAMDIH URANIUM PROJECT
 Time - 10.30 Owner - URANIUM CORPN. OF INDIA LTD.
 Dist. - West Singbhum, State - Jharkhand
 Person(s) Killed :
 1. Milan Karmakar,GFM (Mining), Male, 49 Years
 2. Suraj Kant Singh,Dy.Supdt., Male, 47 Years
 3. Sonaram Kisku,Cont.Wroker, Male, 23 Years

While an operator of diesel operator LHD (load haul dump) was removing the jammed sludge/muck in a decline connected to vertical shaft filled up to a height of about 15.4m from the bottom with sludge and water of an underground mine, suddenly about 212 cubic metre of sludge with water flowed in the decline, trapping and submerging twelve persons who were present in the decline, resulting in death of three persons due to asphyxiation. Nine persons escaped with minor injuries.

Had,

the proper provision been made to prevent irruption of the sludge and water from the shaft to decline and risk assessment study for cleaning of sludge in shaft been done and accordingly SOP been framed and enforced as required by Regulation 128(1) of the Metalliferous Mines Regulations, 1961 read with DG's Technical circular no. 13 of 2002.

this accident could have been averted.

Code : 0992 Flying Pieces(Except due to Explosives)
 (1 Death)

36. Date - 05.08.16 Mine - KOTHANDAN STONE QUARRY
 Time - 1.30 Owner - M/S SRI K. KOTHANDAN
 Dist. - Kanchipuram, State - Tamil Nadu
 Person(s) Killed :
 1. E. Balu, Supervisor, Male, 32 Years

While an excavator operator was testing the fitness of the machine after repair in a quarry by lifting stone pieces and putting them aside, two stone pieces measuring about 0.45m x 0.6m x 0.45m and 0.3m x 0.45m x 0.45m slipped due to swinging of bucket and fell on to a subordinate supervisor who was standing nearby and watching the operation, sustaining serious injuries to which he succumbed on way to the hospital.

had,

the persons not allowed to entered into the workplace and remain near the swing area of the excavator willingly or negligently and endangering the safety and life of person employed therein as required under regulation 191 of the Metalliferous Mines regulations, 1961,

this accident could have been averted.

Code : 0994 Buried in Sands, etc.
(1 Death)

37. Date - 20.03.16 Mine - RASUN GRANITES MINE
Time - 18.00 Owner - M/S RASUN EXPORT PVT. LTD.
Dist. - Prakasham, State - Andhra Pradesh
Person(s) Killed :
1. Gujjula L.Reddy,Helper, Male, 22 Years

While a workman was staying close to the top edge of an approach ramp of about 6m to 7m in height, the adjacent bottom of which was being cleaned by an excavator, suddenly a part of the ramp about 2m in thickness collapsed and the workmen fell down and got trapped under the debris and died.

Had,

i) The excavator operator been vigilant and negligently not omitted to ensure that no one was staying close to the area of operation of the excavator which could endanger life as required under Reg. 181 r.w.Reg.41(1) of Metalliferous mines regulation 1961 r.w. Annexure 106(c) and condition 3.0 of Annexure 106F of the permission granted vide letter no. HR2/Perm-HEMM/NSRO.2010/800 Dated: 20.04.2010 and the code of practice framed at the mine there under.

ii) The work on the south side was not suspended during the shift as the regular mine mate was not present to ensure the compliance of Reg. 116(1) r.w. condition 26.3 of Annexure 106A of the Permission granted vide letter no. HR2/Perm-HEMM/NSRO/2010/800 dated 20.04.2010 under Reg. 106(2) (b) of Metalliferous Mines Regulation 1961.

iii) The deceased been trained at the Group vocational training centre as required under Rules 6 of mines vocational training rules 1961,

this accident could have been averted.

Code : 0999 Unclassified
(2 Deaths)

38. Date - 11.03.16 Mine - LAKWA DRILLING OIL MINE
Time - 11.40 Owner - OIL & NATURAL GAS CORPORATION LTD.
Dist. - Sibsagar, State - Assam
Person(s) Killed :
1. M.N.Buragohain,Dy.Supdnt.Engineer, Male, 56
Years

While a Shift Incharge was observing leakages from hammer union of 'Y' joint and male nipple connection to the Christmas tree, during well testing operation, near cellar pit of an Oil well, he was hit at the chest by uncontrolled movement of Blind tag of 'Y' joint due to sudden breaking of its connection, thus sustaining serious bodily injuries to him, which proved fatal on the way to hospital.

Had,

1) the hammer union of 'Y' joint and male nipple been aligned, tightened and anchored properly, thereby negligently not omitted to ensure safety of persons employed therein, by contravening the provisions of Regulation 78(1) of the Oil Mines Regulations, 1984;

2) the safe practices been followed before entering into the potentially high pressure zone, thereby negligently not endangering his own life, by contravening the provisions of Regulation 98 of the Oil Mines Regulations, 1984;

this accident could have been averted.

39. Date - 26.11.16
Time - 8.15

Mine - LAKWA WORK OVER OIL MINE
Owner - OIL & NATURAL GAS CORPORATION LTD.
Dist. - Sibsagar, State - Assam
Person(s) Killed :

1. Bhaben Gogoi, Contract worker, Male, 26 Years

While hydro pressure testing of annuals valves and X-mass tree on a well head in a work over oil mine was being done, an anchor bolt of well head blurted out and hit a person appointed for observing leakages through annuals valves, thus sustaining serious head injuries which proved fatal on the way to hospital.

Had,

i) the safe practices been followed before entering into the potentially high pressure zone, thereby negligently not endangering his own life, by contravening the provisions of Regulation 98 of the Oil Mines Regulations, 1984;

ii) the operations been carried out under the expert supervision by the principal employer and contractual agency, thereby negligently not omitted to ensure safety of persons employed therein, by contravening the provisions of Regulation 20(7) and 98 of the Oil Mines Regulations, 1984;

iii) the suitable equipments been used, proper safe operating procedures been framed & followed for the well testing operations, and safe and proper working of the mine been ensured by excercising overall management, supervision, control and direction of the well testing operation, thereby negligently not omitting to ensure safety of persons employed therein, by contravening the provisions of Section 17(2) of Mines Act, 1952 read with Regulation 19(1) and 98 of the Oil Mines Regulations, 1984;

this accident could have been averted.



2017

4. ACCIDENT ANALYSIS IN NON-COAL MINES: 2017

- The number of fatal accidents in non coal mines in the year 2017 stands at 42(Including 1 accident in Oil Mine) with 63 fatalities (including 1 fatality in Oil Mine) and 11 persons were seriously injured in these fatal accidents. The number of fatal accidents has increased as compared to previous year 2016.
- The number of serious accidents in the year 2017 stands at 22(including 9 serious accidents in Oil Mine) with 28 seriously injured persons(including 13 serious injured persons in Oil Mine) in these serious accidents. 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 “Fall of Sides (other than overhangs)”. However, most number of serious accident occurred due to “Fall of objects incl. Rolling objects ”. Details can be seen in the statement 4.2.
- Maximum number of fatal accidents occurred in Stone Mines whereas maximum number of serious accidents occurred in Oil Mine. Details can be seen in the statement 4.1.
- Maximum number of fatal accident occurred in the mines in each of the zones i.e Northern Zone, North western Zone and South Central Zone of this Directorate and maximum number of serious accidents occurred in the mines in North Western Zone of this Directorate.
- Major Accident 1:
 - Date of Accident: 31 January 2017; Mine Name: Sindesar Khurd Galena & Sphalarite Mine; Mine Owner: Hindustan Zinc Ltd.; Number of Persons Killed: 4; Number of Persons Seriously Injured: 2
 - Cause of the Accident: While a crew of 7 persons were engaged to place a fabricated roof shed structure over Fine Ore Bin at a height of 34 meters above the ground with the help of a crawler mounted crane, the lattice boom structure of the crane failed and the broken parts of lattice boom structure along with the load, slings and hooks fell over 6 persons standing in the vicinity of the crane to receive serious bodily injuries. Three persons succumbed to their injuries almost instantaneously; another one person succumbed to his injuries after about 24 hours whilst undergoing treatment at hospital; and remaining two persons escaped with serious injuries.
 - What could have averted this accident: Had,
 1. The crane lattice boom structure been tested to ensure that it was in good condition and of adequate strength, and its safe working load been assessed in accordance with BIS 4573 of 1982 and BIS 13376 (Part 1) of 1992, as required by the provisions of Regulation 172 of Metalliferous Mines Regulations, 1961, read with and DGMS Circular No. 10/2002,

2. the crane been not placed in a position where the crane operator was compelled to undertake a blind lift, and proper communication with walkie-talkie sets or other suitable means been provided between the riggers and the crane operator, thus not negligently putting to risk the life and safety of persons employed in the lift-up operations, as required by the provision of Regulation 181 of Metalliferous Mines Regulations 1961, and,
 3. multiple operation of the crane not been carried out simultaneously (swinging as well as lifting up of the boom and/or movement of the entire crane) to place the lifted load to its designated place, while the load was in lifted position (thus resulting in sudden rapid dynamic consequential load onto the main boom and luffing jib structure due to jerk/uncontrolled swinging of the lifted load), as mentioned in SOP No. HZL/ZSRP/ZONE-6/SOP/001 dated 06/09/2014 and clause no. 5-2.1.5(3)(m) of manufacturer-supplied SOP, thus not negligently putting to risk the life and safety of persons employed in the lift-up operations, as required by the provision of Regulation 181 of Metalliferous Mines Regulations 1961, this accident could have been averted.
 - Recommendations: Suitable action is recommended against responsible persons.
- Major Accident 2:
 - Date of Accident: 27 May 2017; Mine Name: Vyshnavi Stone Quarry Mine; Mine Owner: Vyshnavi Stone Crusher; Number of Persons Killed: 7; Number of Persons Seriously Injured: 0
 - Cause of the Accident: While 08(eight) workmen were carrying out jack hammer drilling at a short width bench at a height of 23m from the ground at an opencast open road metal mine, suddenly a part of the side about 32m in length and 5m in width and 0.5 to 3.0m in height including large boulders and associated rock parted and slid down from the top edge from a height of 36m and fell over the drillers who fell down and were buried, 06(six) of them died instantly, 01(one) of them died while being treated at the hospital and 01(one) escaped unhurt.
 - What could have averted this accident: Had,
 1. The working at the mine been kept adequately benched, sloped and kept secured and free of loose debris etc so as to prevent the fall of side and the workmen were not allowed to work under high side with fractures and loose etc. as required under Reg.106(2)(a), rEG.106(3) & (4) r.w Reg.181 of Metalliferous Mines Regulation 1961 .
 2. Qualified statutory mines manager having prescribed qualification was appointed at the mine for overall statutory supervision, management, direction and control at the mine as required under Sec.17 of Mines Act 1952 r.w Reg.34(1) of Metalliferous Mines Regulation 1961. Statutory personnel like Foreman, Mine Mate etc were appointed at the

mine for carrying out the statutory supervision at the mine as required under Reg.37 & Reg.116 of Metalliferous Mines Regulation 1961; this accident could have been averted.

- Recommendations: Suitable action shall be taken against the other person held responsible for the accident.

Statement 4.1

Accidents and placewise casualties in non-coal mines by state-district wise in 2017

| 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. | Oil | | | | | | | | | | | | | | |
| | Assam | | | | | | | | | | | | | | |
| | Dibrugarh | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 8 |
| | Sibsagar | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | TOTAL : ASSAM | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 |
| | Gujarat | | | | | | | | | | | | | | |
| | Ahmedabad | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| | Gandhinagar | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | Mehasana | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| | TOTAL : GUJARAT | 1 | 4 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 4 |
| | ALL INDIA : OIL | 1 | 9 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 13 | 0 | 13 |
| 2. | Asbestos | | | | | | | | | | | | | | |
| | Rajasthan | | | | | | | | | | | | | | |
| | Udaipur | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL : RAJASTHAN | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ALL INDIA : ASBESTOS | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3. Bauxite | | | | | | | | | | | | | | |
| Orissa | | | | | | | | | | | | | | |
| Koraput | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| TOTAL : ORISSA | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| ALL INDIA : BAUXITE | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 4. Chromite | | | | | | | | | | | | | | |
| Orissa | | | | | | | | | | | | | | |
| Jajpur | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| TOTAL : ORISSA | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| ALL INDIA : CHROMITE | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 5. Copper | | | | | | | | | | | | | | |
| Jharkhand | | | | | | | | | | | | | | |
| West Singbhum | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| TOTAL : JHARKHAND | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Madhya Pradesh | | | | | | | | | | | | | | |
| Balaghat | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : MADHYA PRADESH | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| ALL INDIA : COPPER | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| 6. Galena & Sphalarite | | | | | | | | | | | | | | |
| Rajasthan | | | | | | | | | | | | | | |
| Bhilwara | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| Udaipur | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Rajsamand | 1 | 1 | 0 | 0 | 0 | 4 | 0 | 4 | 1 | 0 | 0 | 2 | 0 | 3 |

| | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TOTAL : RAJASTHAN | 2 | 3 | 0 | 0 | 0 | 5 | 0 | 5 | 1 | 0 | 0 | 4 | 0 | 5 |
| ALL INDIA : GALENA & SPHALARITE | 2 | 3 | 0 | 0 | 0 | 5 | 0 | 5 | 1 | 0 | 0 | 4 | 0 | 5 |
| 7. Gold | | | | | | | | | | | | | | |
| Karnataka | | | | | | | | | | | | | | |
| Raichur | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| TOTAL : KARNATAKA | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| ALL INDIA : GOLD | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 8. Granite | | | | | | | | | | | | | | |
| Andhra Pradesh | | | | | | | | | | | | | | |
| Prakasham | 2 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : ANDHRA PRADESH | 2 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rajasthan | | | | | | | | | | | | | | |
| Jalore | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : RAJASTHAN | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tamil Nadu | | | | | | | | | | | | | | |
| Karur | 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 : GRANITE | 4 | 0 | 0 | 8 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9. Iron | | | | | | | | | | | | | | |
| Chhattisgarh | | | | | | | | | | | | | | |
| Dantewara | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 5 |
| TOTAL : CHHATTISGARH | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 5 |

| | | | | | | | | | | | | | | | |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Goa | | | | | | | | | | | | | | | |
| South Goa | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : GOA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Karnataka | | | | | | | | | | | | | | | |
| Bellary | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : KARNATAKA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Orissa | | | | | | | | | | | | | | | |
| Keonjhar | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Mayurbhanj | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : ORISSA | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| ALL INDIA : IRON | 3 | 4 | 0 | 4 | 0 | 0 | 0 | 4 | 1 | 1 | 0 | 4 | 0 | 6 | |
| 10. Limestone | | | | | | | | | | | | | | | |
| Karnataka | | | | | | | | | | | | | | | |
| Kalaburagi | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : KARNATAKA | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Madhya Pradesh | | | | | | | | | | | | | | | |
| Satna | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : MADHYA PRADESH | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rajasthan | | | | | | | | | | | | | | | |
| Jaipur | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kota | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Udaipur | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : RAJASTHAN | 3 | 0 | 1 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ALL INDIA : LIMESTONE | 5 | 0 | 1 | 5 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11. Manganese | | | | | | | | | | | | | | |
| Andhra Pradesh | | | | | | | | | | | | | | |
| Vizianagaram | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : ANDHRA PRADESH | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Maharashtra | | | | | | | | | | | | | | |
| Bhandara | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nagpur | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 2 |
| TOTAL : MAHARASHTRA | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 |
| ALL INDIA : MANGANESE | 3 | 0 | 2 | 2 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 2 |
| 12. Marble | | | | | | | | | | | | | | |
| Rajasthan | | | | | | | | | | | | | | |
| Nagaur | 2 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| Udaipur | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rajsamand | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : RAJASTHAN | 5 | 0 | 0 | 6 | 0 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : MARBLE | 5 | 0 | 0 | 6 | 0 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13. Sillimanite | | | | | | | | | | | | | | |
| Kerala | | | | | | | | | | | | | | |
| Kollam | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| TOTAL : KERALA | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| ALL INDIA : SILLIMANITE | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 14. Stone | | | | | | | | | | | | | | |
| Andhra Pradesh | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|------------------------|----|---|---|----|---|---|---|----|---|---|---|---|---|---|
| Guntur | 1 | 0 | 0 | 7 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 |
| Krishna | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Srikakulam | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Vizianagaram | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : ANDHRA PRADESH | 4 | 0 | 0 | 10 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| Haryana | | | | | | | | | | | | | | |
| Panchkula | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : HARYANA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| Jharkhand | | | | | | | | | | | | | | |
| Koderma | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : JHARKHAND | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| Rajasthan | | | | | | | | | | | | | | |
| Jhunjhunu | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dausa | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : RAJASTHAN | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| Tamil Nadu | | | | | | | | | | | | | | |
| Coimbatore | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 1 |
| Tirunelveli | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 3 |
| Krishnagiri | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Thoothukkudi | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : TAMIL NADU | 4 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 0 | 4 | 0 | 0 | 0 | 4 |
| <hr/> | | | | | | | | | | | | | | |
| West Bengal | | | | | | | | | | | | | | |
| Birbhum | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : WEST BENGAL | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 |
| <hr/> | | | | | | | | | | | | | | |
| ALL INDIA : STONE | 14 | 0 | 0 | 23 | 0 | 0 | 0 | 23 | 0 | 6 | 0 | 0 | 0 | 6 |
| <hr/> | | | | | | | | | | | | | | |

15. Rhyolite
Rajasthan
Jodhpur

| | | | | | | | | | | | | | | |
|-----------------------------------|----|----|---|----|---|---|---|----|---|---|---|----|---|----|
| | 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 |
| ALL INDIA : RHYOLITE | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : ALL NON-COAL MINERALS | 42 | 22 | 3 | 52 | 0 | 8 | 0 | 63 | 7 | 8 | 0 | 24 | 0 | 39 |

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

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

| 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 | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| TOTAL : FALL OF ROOF | Manganese | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 |
| | | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 |
| TOTAL : FALL OF SIDES (OTHER THAN OVERHANGS) | Limestone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| | Marble | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 0 |
| | Stone | 0 | 0 | 0 | 0 | 0 | 4 | 11 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 11 | 3 | 0 | 0 |
| | Rhyolite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| | | 0 | 0 | 0 | 0 | 0 | 8 | 17 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 17 | 3 | 0 | 0 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : COLLAPSE OF SHAFT | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | |
| TOTAL : GROUND MOVEMENT | | 1 | 1 | 2 | 0 | 0 | 8 | 17 | 3 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 10 | 19 | 5 | 0 | 0 |
| TOTAL : BREAKAGE OF ROPE,CHAIN,CRAW/SUSPN. GEAR | Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| | | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : OTHER ACCIDENT DUE TO WINDING OPERATION | Copper | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| | Gold | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| | | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| TOTAL : TRANSPORTATION MACHINERY (WINDING) | | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 2 |
| TOTAL : CONVEYORS | Limestone | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| | | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Bauxite | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |
| Iron | | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 |
| Limestone | | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TOTAL : DUMPERS | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 3 | 4 | 1 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| TOTAL : WHEELED TRACKLESS (TRUCK, TANKER, ETC.) | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| TOTAL : TRANSPORTATION MACHINERY (NON-WINDING) | 1 | 1 | 0 | 0 | 0 | 4 | 5 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 6 | 7 | 1 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| TOTAL : DRILLING MACHINES | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| Asbestos | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Marble | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : LOADING MACHINES | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 |
| Iron | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : CRUSHING & SCREENING PLANTS | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Copper | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : OTHER HEAVY EARTH MOVING MACHINERY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Asbestos | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Galena & Sphalarite | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 2 | 0 | 0 | 1 | 4 | 2 | 1 | 1 |
| TOTAL : OTHER NON-TRANSPORTATION MACHINERY | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 4 | 2 | 0 | 0 | 2 | 5 | 2 | 1 | 1 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| TOTAL : MACHINERY OTHER THAN TRANSP. MACHINERY | 0 | 0 | 0 | 2 | 2 | 3 | 3 | 0 | 1 | 1 | 3 | 6 | 2 | 1 | 1 | 6 | 9 | 2 | 4 | 4 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : DEEP HOLE BLASTING PROJECTILES | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : OTHER PROJECTILES | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 0 | 0 |
| TOTAL : OTHER EXPLOSIVE ACCIDENTS | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 2 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| TOTAL : EXPLOSIVES | 0 | 0 | 0 | 0 | 0 | 4 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 7 | 2 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Iron | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : OVERHEAD LINES | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|----|----|---|---|---|---|---|---|---|---|----|----|---|---|---|
| TOTAL : ENERGIZED MACHINES | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 1 | 3 |
| TOTAL : OTHER ELECTRICAL ACCIDENTS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 1 | 3 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| TOTAL : ELECTRICITY | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 2 | 3 | 0 | 1 | 3 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 1 | 5 |
| TOTAL : OUTBREAK OF FIRE OR SPONTANEOUS HEATING | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 1 | 5 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| TOTAL : DUST, GAS & OTHER COMBUSTIBLE MATERIAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 1 | 5 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Chromite | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Galena & Sphalarite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Iron | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| Manganese | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Marble | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 |
| TOTAL : FALL OF PERSON FROM HEIGHT/INTO DEPTH | 1 | 1 | 0 | 1 | 1 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 6 | 6 | 0 | 3 | 3 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Limestone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Marble | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Sillimanite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : FALL OF PERSONS ON THE SAME LEVEL | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 0 | 1 | 1 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 3 | 3 |
| Chromite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Manganese | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 |
| TOTAL : FALL OF OBJECTS INCL. ROLLING OBJECTS | 0 | 0 | 0 | 0 | 0 | 4 | 8 | 1 | 1 | 1 | 0 | 0 | 0 | 3 | 3 | 4 | 8 | 1 | 4 | 4 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : OTHER ACCIDENTS DUE TO FALLS | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| TOTAL : FALLS (OTHER THAN FALL OF GROUND) | 1 | 1 | 0 | 1 | 1 | 12 | 16 | 1 | 1 | 1 | 0 | 0 | 0 | 6 | 6 | 13 | 17 | 1 | 8 | 8 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : FLYING PIECES (EXCEPT DUE TO EXPLOSIVES) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 3 | 3 |
| Galena & Sphalarite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |

| | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|----|----|---|---|---|---|---|---|----|----|----|----|----|----|----|
| Sillimanite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : UNCLASSIFIED | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 5 | 6 |
| ----- | | | | | | | | | | | | | | | | | | | | |
| TOTAL : OTHER CAUSES | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 6 | 6 |
| ----- | | | | | | | | | | | | | | | | | | | | |
| ALL INDIA : ALL NON-COAL MINERALS | 3 | 3 | 2 | 5 | 5 | 34 | 52 | 6 | 2 | 2 | 5 | 8 | 3 | 15 | 21 | 42 | 63 | 11 | 22 | 28 |
| ----- | | | | | | | | | | | | | | | | | | | | |

STATEMENT 4.3

Fatal accidents and casualties in non-coal mines by broad cause in 2017

| Cause/Mineral | Oil | Copper | Galena | Gold | Iron | Lime- Stone | Mang- anese | Stone | Others | TOTAL |
|---------------------------------------|----------|----------|----------|----------|----------|----------------|----------------|-----------|----------|-----------|
| Fall of Roof Killed-S/Injured : | 0 0-0 | 0 0-0 | 0 0-0 | 0 0-0 | 0 0-0 | 0 0-0 | 1 1-2 | 0 0-0 | 0 0-0 | 1 1-2 |
| Fall of Sides Killed-S/Injured : | 0 0-0 | 0 0-0 | 0 0-0 | 0 0-0 | 0 0-0 | 1 1-0 | 0 0-0 | 4 11-3 | 3 5-0 | 8 17-3 |
| Dumpers Killed-S/Injured : | 0 0-0 | 0 0-0 | 0 0-0 | 0 0-0 | 1 2-0 | 1 1-0 | 0 0-0 | 0 0-0 | 1 1-1 | 3 4-1 |
| Trucks Killed-S/Injured : | 0 0-0 | 0 0-0 | 0 0-0 | 0 0-0 | 0 0-0 | 0 0-0 | 0 0-0 | 2 2-0 | 0 0-0 | 2 2-0 |
| Other Machinery Killed-S/Injured : | 1 1-0 | 0 0-0 | 1 4-2 | 0 0-0 | 0 0-0 | 1 1-0 | 0 0-0 | 1 1-0 | 4 4-0 | 8 11-2 |
| Explosives Killed-S/Injured : | 0 0-0 | 0 0-0 | 0 0-0 | 0 0-0 | 0 0-0 | 0 0-0 | 0 0-0 | 3 4-2 | 1 3-0 | 4 7-2 |
| Fall of Persons Killed-S/Injured : | 0 0-0 | 0 0-0 | 0 0-0 | 0 0-0 | 1 1-0 | 1 1-0 | 1 1-0 | 3 3-0 | 2 2-0 | 8 8-0 |
| Fall of Objects Killed-S/Injured : | 0 0-0 | 0 0-0 | 0 0-0 | 0 0-0 | 0 0-0 | 0 0-0 | 1 2-0 | 1 2-1 | 2 4-0 | 4 8-1 |
| Other causes Killed-S/Injured : | 0 0-0 | 0 0-0 | 1 1-0 | 0 0-0 | 1 1-0 | 1 2-0 | 0 0-0 | 0 0-0 | 1 1-0 | 4 5-0 |

| | | | | | | | | | | |
|--------------------|-----|-----|-----|-----|-----|-----|-----|------|------|-------|
| Belowground | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 3 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 1-0 | 2-2 | 0-0 | 0-0 | 3-2 |
| Opencast | 0 | 0 | 0 | 0 | 3 | 4 | 1 | 14 | 12 | 34 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 4-0 | 5-0 | 2-0 | 23-6 | 18-0 | 52-6 |
| Aboveground | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 5 |
| Killed-S/Injured : | 1-0 | 0-0 | 5-2 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 2-1 | 8-3 |
| ----- | | | | | | | | | | |
| TOTAL | 1 | 0 | 2 | 0 | 3 | 5 | 3 | 14 | 14 | 42 |
| Killed-S/Injured : | 1-0 | 0-0 | 5-2 | 0-0 | 4-0 | 6-0 | 4-2 | 23-6 | 20-1 | 63-11 |
| ----- | | | | | | | | | | |

STATEMENT 4.4**Serious accidents and seriously injured persons in non-coal mines by broad causes in 2017**

| Cause/Mineral | Oil | Copper | Galena | Gold | Iron | Lime- Stone | Mang- anese | Stone | Others | TOTAL |
|--------------------------------|--------|--------|--------|--------|--------|----------------|----------------|--------|--------|---------|
| Fall of Roof S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Fall of Sides S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Dumpers S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Trucks S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Other Machinery S/Injured : | 1 1 | 2 2 | 1 1 | 1 1 | 1 1 | 0 0 | 0 0 | 0 0 | 0 0 | 6 6 |
| Explosives S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Fall of Persons S/Injured : | 0 0 | 0 0 | 1 1 | 0 0 | 1 1 | 0 0 | 0 0 | 0 0 | 2 2 | 4 4 |
| Fall of Objects S/Injured : | 3 3 | 0 0 | 0 0 | 0 0 | 1 1 | 0 0 | 0 0 | 0 0 | 0 0 | 4 4 |
| Other causes S/Injured : | 5 9 | 0 0 | 1 1 | 0 0 | 1 3 | 0 0 | 0 0 | 0 0 | 1 1 | 8 14 |

| | | | | | | | | | | |
|-------------|----|---|---|---|---|---|---|---|---|----|
| Belowground | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 5 |
| S/Injured : | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 5 |
| Opencast | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| S/Injured : | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| Aboveground | 9 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 15 |
| S/Injured : | 13 | 0 | 2 | 0 | 4 | 0 | 0 | 0 | 2 | 21 |
| ----- | | | | | | | | | | |
| TOTAL | 9 | 2 | 3 | 1 | 4 | 0 | 0 | 0 | 3 | 22 |
| S/Injured : | 13 | 2 | 3 | 1 | 6 | 0 | 0 | 0 | 3 | 28 |
| ----- | | | | | | | | | | |

STATEMENT 4.5

Regionwise/zonewise accidents in Non-Coal mines in 2017

| Region/Zone | Fatal Accidents | | | Serious Accidents | |
|--------------------|------------------|------------|-----------|-------------------|-----------|
| | No. of Accidents | Fatalities | S/Injured | No. of Accidents | S/Injured |
| Koderma | 2 | 2 | 0 | 0 | 0 |
| Central Zone | 2 | 2 | 0 | 0 | 0 |
| Guwahati | 0 | 0 | 0 | 5 | 9 |
| Sitarampur II | 1 | 2 | 2 | 0 | 0 |
| Eastern Zone | 1 | 2 | 2 | 5 | 9 |
| Ahmedabad | 1 | 1 | 0 | 3 | 3 |
| Udaipur | 8 | 13 | 2 | 3 | 3 |
| North-Western Zone | 9 | 14 | 2 | 6 | 6 |
| Ajmer | 6 | 8 | 0 | 1 | 1 |
| Gwalior | 1 | 1 | 0 | 0 | 0 |
| Ghaziabad | 2 | 2 | 0 | 0 | 0 |
| Northern Zone | 9 | 11 | 0 | 1 | 1 |
| Goa | 1 | 1 | 0 | 0 | 0 |
| Hyderabad I | 4 | 5 | 0 | 0 | 0 |
| Hyderabad II | 4 | 13 | 0 | 0 | 0 |
| South-Central Zone | 9 | 19 | 0 | 0 | 0 |
| Bhubaneswar | 2 | 2 | 1 | 1 | 1 |
| Chaibasa | 1 | 2 | 0 | 2 | 2 |
| South-Eastern Zone | 3 | 4 | 1 | 3 | 3 |
| Bangluru | 1 | 1 | 0 | 2 | 2 |
| Bellary | 1 | 1 | 0 | 1 | 1 |
| Chennai | 4 | 6 | 4 | 0 | 0 |
| Southern Zone | 6 | 8 | 4 | 3 | 3 |
| Bilaspur | 0 | 0 | 0 | 3 | 5 |
| Jabalpur | 1 | 1 | 0 | 0 | 0 |
| Nagpur I | 2 | 2 | 2 | 1 | 1 |
| Western Zone | 3 | 3 | 2 | 4 | 6 |
| ALL INDIA | 42 | 63 | 11 | 22 | 28 |

STATEMENT 4.6**Fatal accidents in non-coal mines by cause and responsibility in 2017**

| Responsibility / Major Cause Group | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Total |
|------------------------------------|----|---|---|---|---|---|---|----|---|-------|
| Misadventure | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Management | 5 | 0 | 1 | 3 | 1 | 0 | 0 | 6 | 0 | 16 |
| Management & Sub. Sup. Staff(SSS) | 5 | 1 | 2 | 2 | 0 | 1 | 0 | 2 | 0 | 13 |
| Management, SSS & Deceased | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Management, SSS & Others | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| Management & Shotfirer | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Management & Deceased | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| Management & Contractor's Worker | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 3 |
| Subordinate Supervisory Staff(SSS) | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| Sub.Sup.Staff & Others | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Total | 10 | 1 | 6 | 6 | 4 | 2 | 0 | 13 | 0 | 42 |

STATEMENT 4.7**Summary of Findings of Fatal Accidents in Non-Coal mines during the year 2017**

 Code : 0100 Ground Movement

 Code : 0111 Fall of Roof
 (1 Death)

1. Date - 01.05.17 Mine - KANDRI MANGANESE MINE
 Time - 13.00 Owner - MANGANESE ORE [INDIA] LTD.
 Dist. - Nagpur, State - Maharashtra
 Person(s) Killed :
 1. V.M.Yadav,UG Worker, Male, 36 Years

While a crew of three piece rated workers were engaged for clearing the roof fall instope of an underground manganese mine, a layer of ore measuring 1.0m x 0.6m x 0.2m parted from the roof at a height of 3.0m & fell on two of them inflicting serious bodily injuries and one of them succumbed on the way to hospital. The roof fall was followed by another small fall of ore from roof inflicting serious bodily injuries to another person, who was engaged there for rescue work.

Had,

i) work of clearing the part of roof fall not been undertaken until the newly exposed roof/back been examined and made safe by erecting temporary supports adequately, as required under the provision of Reg. 113(6) of the Metalliferous Mines Regulations 1961;

ii) the geologically disturbed roof after the fall been examined carefully, made safe and kept secure by dressing and additionally supported as per SSR before engaging the work persons there at; as required under the provision of Regulation 112 & 116 of the Metalliferous Mines Regulations, 1961 read with Para 6.0 of SSR of the stope approved vide letter No. NR-1/1569 dated 25/10/2016; and

iii) the supervisory officials carried out their respective duties to enforce the provisions of the Act, Regulations and Orders made there under to ensure safety of persons employed therein as required under the provisions of Regulations 47, 46 & 45 of the Metalliferous Mines Regulations 1961,

this accident could have been averted.

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

2. Date - 01.05.17 Mine - DEVATA L/S & MARBLE MINE (M/L-52/97)
 Time - 16.45 Owner - SUBHAS MEENA
 Dist. - Jaipur, State - Rajasthan
 Person(s) Killed :
 1. S.Singh Rajput, E.Operator, Male, 35 Years

While an excavator, deployed at the foot of 40 m high and almost Vertical side in an opencast mine was preparing to load overburden into truck, a mass of fractured rock measuring about 20m (height) x 10m (width) x 5m (thickness) sloughed off and fell down from it, followed by overlying alluvial soil, from a height of about 30m, toppling and burying the excavator including its operator and the truck, killing the excavator operator at the spot. The truck driver escaped unhurt.

Had

i) the height of bench in overburden and rock formation in the mine been not more than the digging height of machine (excavator) used for digging, excavation and removal of blasted material and the side of bench of the opencast workings been kept secured by proper dressing so as to prevent danger from fall of sides as required under clause 2(a) & (c) of the permission granted under Regulation 106(2) (b) of the Metalliferous Mines Regulation, 1961, vide letter No.AR/DMS/106(2) (b) 2014/15683 dated 07.11.2014 and

ii) the mine not been worked without a duly qualified manager appointed to take charge for overall management, control, supervision and direction thereof, as required by Regulation 34(1)(a) of the Metalliferous Mines Regulations, 1961, read with Section 17 of the Mines Act, 1952,

this accident could have been averted.

3. Date - 27.05.17
Time - 23.45

Mine - VYSHNAVI STONE QUARRY
Owner - VYSHNAVI STONE CRUSHER
Dist. - Guntur, State - Andhra Pradesh
Person(s) Killed :

1. T.C.B.Sowri, Driller, Male, 56 Years
2. P.Rayappa, Driller, Male, 39 Years
3. B.N.Raju, Driller, Male, 34 Years
4. D.Anjaneyulu, Driller, Male, 38 Years
5. P.Sarvana, Driller, Male, 30 Years
6. Anthula Veeraiah, Driller, Male, 37 Years
7. Mande Sairam, Driller, Male, 24 Years

While 08(eight) workmen were carrying out jack hammer drilling at a short width bench at a height of 23m from the ground at an opencast open road metal mine, suddenly a part of the side about 32m in length and 5m in width and 0.5 to 3.0m in height including large boulders and associated rock parted and slid down from the top edge from a height of 36m and fell over the drillers who fell down and were buried, 06(six) of them died instantly, 01(one) of them died while being treated at the hospital and 01(one) escaped unhurt.

Had,

a) The working at the mine been kept adequately benched, sloped and kept secured and free of loose debris etc so as to prevent the fall of side and the workmen were not allowed to work under high side with fractures and loose etc. as required under Reg.106(2) (a), rEG.106(3) & (4) r.w Reg.181 of Metalliferous Mines Regulation 1961 .

b) Qualified statutory mines manager having prescribed qualification was appointed at the mine for overall statutory supervision, management, direction and control at the mine as required under Sec.17 of Mines Act 1952 r.w Reg.34(1) of Metalliferous Mines

Regulation 1961. Statutory personnel like Foreman, Mine Mate etc were appointed at the mine for carrying out the statutory supervision at the mine as required under Reg.37 & Reg.116 of Metalliferous Mines Regulation 1961,

this accident could have been averted.

| | | |
|----|---------------------------------|---|
| 4. | Date - 28.05.17 Time - 15.00 | Mine - GUNAWATI CHOSIRA/BHONT RANGE MARBLE MINE Owner - HAZI ISHAQUE GAFOOR & SONS Dist. - Nagaur, State - Rajasthan Person(s) Killed : 1. Devaram, Mazdoor, Male, 36 Years 2. Rakesh Gurjar, Mazdoor, Male, 26 Years 3. Shrawan Ram, Mazdoor, Male, 40 Years |
|----|---------------------------------|---|

While a group of six workers were taking rest beneath/at the foot of a 60m high hanging wall of an opencast marble mine measuring 17m x 12.5m(only) in area, which had neither been benched nor kept sloped at an angle of safety not exceeding 60 degrees from horizontal, or kept secured to prevent danger from fall of sides and had undercuts and overhangs, a part of the high wall measuring 15 metres(length) x 6 metres(height) x 1.5 metres(thick) fell down from a height of 6 metres from south eastern corner of the mine (with the fall extending into adjoining discontinued mine connected to it as well), burying three of them underneath its debris who died almost instantaneously on the spot. The remaining three persons escaped with minor injuries.

Had,

i) The sides of opencast workings been benched or kept sloped at an angle of safety not exceeding 60 degrees from horizontal, or kept secured and free of undercuts and overhangs to prevent danger from fall of sides, as required by the provisions of Regulation 106(2) & (3) & (5) of the Metalliferous Mines Regulations,1961,

ii) the mine been placed under the charge of a manager holding prescribed qualifications as to ensure that all work in the mine was carried on in accordance with the provisions of the Mines Act, and of the regulations, rules, bye-laws and orders made there-under, whereby safety of the mine as well as life and safety of persons employed in the mine could be ensured in every respect, as required by the provisions of Section 17(1) of the Mines Act,1952, read with Regulation 34(1) of the Metalliferous Mines Regulations,1961, and

iii) A mining mate been appointed to personally supervise operations connected with the mine and ensure proper observance of the provisions of the Mines Act,1952 and of the rules and regulations framed there-under, whereby safety of the mine as well as life and safety of persons employed in the mine could be ensured in every respect,as required to be appointed under Regulation 116 of the Metalliferous Mines Regulations,1961,

this accident would have been averted.

| | | |
|----|---------------------------------|---|
| 5. | Date - 06.06.17 Time - 17.45 | Mine - KHARANDIYA MARBLE MINE Owner - MAHADEV MARBLE FARARA Dist. - Rajsamand, State - Rajasthan Person(s) Killed : 1. Leher Singh Rajput, Gen. Mazdoor, Male, 40 Years |
|----|---------------------------------|---|

While three persons were drilling hole in the marble block for sizing at the bottom of the quarry, suddenly loose stones/rocks parted and started rolling down from the side of opencast working and the persons started running on the quarry floor, one of them was hit by the rolling stones/rocks and received injury who later succumbed to his injury in the hospital where as the other two escaped with minor injury.

Had,

1) The persons not been deployed at the place where sides in the excavation were not adequately benched, sloped or secured so as to prevent danger from fall of sides as required under Regulation 106(3) of the Metalliferous Mines Regulations,1961.

2) The loose stones in the sides of excavation been properly dressed to make and keep it secured as required under Regulation 106(4) of the Metalliferous Mines Regulations,1961.

3) The working in the mine been carried out under a person having prescribed qualification and appointed as manager to ensure safety in the mine as required under Sec.17(1) & 18(4) of the Mines Act read with Regulation34(1) of the Metalliferous Mines Regulations,1961.

4) The foreman appointed in the mine devoted whole of his time to his duties and not left the place of work without any justifiable cause during hours of work to ensure safety of the work persons at work as required under Regulation 46(9) (a) (b) of the Metalliferous Mines Regulations,1961.

5) A competent person been appointed to secure that adequate inspection of mine and thorough supervision of all operations in the mine so as ensure that works were carried out in a safe and secured manner as required under Sec.18(4) of the Mines Act read with Regulation 39(1) of the Metalliferous Mines Regulations,1961.

This accident could have been averted.

6. Date - 22.06.17
Time - 10.00

Mine - MASONRY STONE MINE ML NO.172/1994

Owner - GORDHAN RAMDAYAL STONE COMPANY

Dist. - Dausa, State - Rajasthan

Person(s) Killed :

1. Nahena Devi,Mazoor, Male, 35 Years

While a tractor trolley was being loaded with masonry stone by two female workers at the foot of 40m high face in an opencast masonry stone mine, a mass of stone measuring about 0.3m X 0.3 m X 0.1 m parted from the side and fell down through a height of about 25m inflicting serious head injury to one of the worker to which she succumbed after about 04 hours at hospital.

Had,

i) side of the opencast workings been kept benched, sloped or secured to prevent danger from fall of sides as required by Regulation 106 (2) & (3) of the Metalliferous Mines Regulation,1961,

ii) overall management,control, supervision and direction of the mine been ensured and the mine not been worked in the absence of the manager as required by clause 7.0 of the authorization under Regulation 34(4) and 34(6) of the Metalliferous Mines Regulations, 1961, granted vide letter No.AJR/DMS/34(4)/2017/4139 dated 07.06.2017 and

iii) helmet been provided and the work persons not been allowed to work in the mine without wearing helmet as required by Regulation 182A of the Metalliferous Mines Regulations 1961,

this accident could have been avoided.

| | | |
|----|--------------------------------|---|
| 7. | Date - 30.07.17 Time - 8.30 | Mine - MODA PAHAD MASONRY STONE MINE M.N.189/19 Owner - RAWAT SINGH Dist. - Jhunjhunu, State - Rajasthan Person(s) Killed : 1. Rohitas Naik, Truck Driver, Male, 45 Years |
|----|--------------------------------|---|

While a truck loaded with masonry stone was leaving the face at the foot of 40m high and almost vertical side in an opencast masonry stone mine, a mass of fractured rock measuring about 7m(length) x 2m (width) x 0.5m(thickness) sloughed off from the side and fell down on the truck from a height of about 8m, killing the driver at the spot.

Had,

i) the height of bench in the rock formation in the mine been not more than the digging height of machine(excavator) used for digging, excavation and removal of blasted material or 6.0m and the side of bench of the opencast workings been kept secured by proper dressing so as to prevent danger from fall of sides as required by Regulation 106 (2)(b)&(3) of the Metalliferous Mines Regulation,1961, read with clause 2.1 (a)&(c) of the permission granted under this Regulation vide letter No.AJR/DMS/106(2)(B)2015/4203 dated 15.04.2015,

ii) the mine not been worked without a duly qualified manager appointed to take charge for overall management, control, supervision and direction thereof, as required by Regulation 34(1) (a) of the Metalliferous Mines Regulations,1961, read with Section 17 of the Mines Act,1952 and

iii) the mine not been worked in violation of terms of the prohibitory Order under Section 22(3) of the Mines Act,1952 imposed therein vide this Directorate's letter No.AJ/DMS/Order u/s 22(3)/2009/4618 dated 27.08.2009, read with Section 22(3) of the Mines Act,1952,

this accident could have been averted.

| | | |
|----|--------------------------------|--|
| 8. | Date - 05.10.17 Time - 8.45 | Mine - ROUGH STONE MINE Owner - G. DINESH Dist. - Tirunelveli, State - Tamil Nadu Person(s) Killed : 1. M.Durai, Driller, Male, 34 Years 2. M.Thankaraja, Driller, Male, 46 Years |
|----|--------------------------------|--|

While five persons were engaged in drilling holes in the stone boulders at the bottom of the quarry, a portion of stone measuring about 8.0m x 1.2m x 0.5m got dislodged from the side and fell from a height of about 10m which broke into pieces and hit the persons employed therein, inflicting serious bodily injuries to which two persons succumbed on the spot and remaining three escaped with injuries.

Had,

i) The manager of the mine ensured that the sides of the open cast workings been adequately benched, sloped or secured so as to prevent danger from fall of sides before employing persons at the bottom of the bench as required under Regulation 106(3) of the Metalliferous Mines Regulations 1961,

ii) the Foreman given prompt attention for dressing of loose rocks from the side of the open cast workings and securing the workplace before employing persons at the bottom of the bench as required under Regulation 46(7) of the Metalliferous Mines Regulations, 1961,

iii) the Mining Mate observed the loose rocks on the side of the open cast workings during the course of his inspection, and withdrawn all persons from that place, as required under Regulation 47(5) (a) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

9. Date - 28.10.17
Time - 17.00

Mine - SEWAKI KALLA RHYOLITE MINE
Owner - SUKHI DEVI
Dist. - Jodhpur, State - Rajasthan
Person(s) Killed :

1. Dhanna Ram, Exca. Operator, Male, 23 Years

While an excavator (rock breaker), deployed at the face near a 20m high and almost vertical side in an opencast rhyolite mine was breaking boulders of rock, a mass of rock measuring about 1.5 (height) x 1.5m(width) x 1.0m(thickness) fell down from the side through a height of about 10m, smashing the cabin of the excavator and inflicting serious bodily injuries to its operator to which he succumbed at the spot.

Had,

i) sides of the opencast workings been adequately benched, sloped or secured so as to prevent danger from fall of side, as required under the provisions of Regulation 106(3) of the Metalliferous Mines Regulations, 1961, and

ii) the mine not been worked without a duly qualified manager appointed to take charge for overall management, control, supervision and direction thereof, as required by Regulation 34(1)(a) of the Metalliferous Mines Regulations, 1961, read with Section 17 of the Mines Act, 1952,

this accident could have been averted.

Code : 0119 Collapse of Shaft
(1 Death)

10. Date - 03.11.17
Time - 6.00

Mine - RAMPURA AGUCHA GALENA & SPH MIN
Owner - HINDUSTAN ZINC LTD.
Dist. - Bhilwara, State - Rajasthan
Person(s) Killed :

1. S.L.Kumhar, Fitter, Male, 27 Years

While a crew of three persons was lifting a submersible pump from the shaft using 100T mobile crane in conjunction with slings clamped on the main rope, panic was created by uncontrolled downward movement of pump, main rope and cable due to

slippage of clamps which led to fall of one of the crew members and hit his head against a girder in an attempt to run for shelter. The injured succumbed to his injuries during treatment in hospital.

Had,

i) the competent person appointed for supervision not left the place of work till the completion of task & ensured that no person comes in the line of fire while lifting pump using crane & wire rope attachment, as required under the provisions of Regulation 42(b) of the Metalliferous Mines Regulations, 1961.

ii) the adequate heed been given to clamp manufacture's warning and application instructions while designing & assembling of the mechanism used for lifting & lowering of submersible pump from the shaft & same being properly tested & examined by the the competent person(s) for its safe working load to ensure that machinery/mechanism being of good construction, suitable material, adequate strength & free from defects as required under the provisions of Regulation 53 (a) & (d) read with Regulation 172 of the Metalliferous Mines Regulations, 1961 and DGMS Technical Circular No.09 of 2008,

this accident would have been averted.

Code : 0200 Transportation Machinery (Winding)

Code : 0222 Breakage of Rope, Chain, Craw/Susp. Gear
(1 Death)

11. Date - 14.08.17
Time - 14.30

Mine - MANU GRANITE MINE
Owner - MANU GRANITES
Dist. - Prakasham, State - Andhra Pradesh
Person(s) Killed :
1. C.Y.Babu, Excavator Operator, Male, 21 Years

While a Derrick crane operator was handling a granite block, the Mast Pin of the Derrick crane sheared off resulting falling of Granite Block with broken boom over an excavator operator's cabin, to which excavator operator succumbed instantaneously.

Had the Derrick Crane been

i) Operated only after withdrawing all the persons from the swing circle (as required under condition No.20.1(i) in Annexure 106A of permission granted under Regulation 106(2) (b) of the Metalliferous Mines Regulations, 1961).

ii) Properly maintained for adequate strength and free from visible defects (as required under Regulation 172 of the Metalliferous Mines Regulations, 1961 read with DGMS (Technical) Circular No.05 of 2004), this accident could have been averted.

Code : 0334 Conveyors
(1 Death)

Code : 0335 Dumpers
(4 Deaths)

Had,

i) the berm been provided of height not less than diameter of the tyre of the largest vehicle plying on the road and been of strong construction as required under condition 5.0 V (c) of the annexure attached to the permission granted under Regulation 106 (2) (b) of the Metalliferous Mines Regulations, 1961, vide this Directorate's letter No.330137/3490, dated 10.11.2015,

this accident could have been averted.

14. Date - 24.06.17
Time - 10.30

Mine - LAXMIPURA LIMESTONE MINE
Owner - ASSOCIATED STONE INDUSTRIES (KOTA) LTD.
Dist. - Kota, State - Rajasthan
Person(s) Killed :
1. Kailash Pal, Dumper Optr., Male, 57 Years

While a dumper was reversing to unload overburden material from the edge of a dump in OB dump-yard, it rolled down to topple onto the lower bench nearly 20m below. The dumper operator, who was not wearing the seat-belt, was thrown out of the cabin to receive serious head injuries to which he succumbed.

Had,

i) the dumper not been reversed unmindfully without paying attention to signals given by the spotter, dumping of OB not been commenced unless the dumper was brought to a stationary condition by application of dump-brakes, and the dumper not been driven without wearing a seat belt, thus not negligently endangering his own life and safety, as called for by the provisions of Regulation 181 of the Metalliferous Mines Regulations, 1961,

ii) sufficient stop blocks been provided at the tipping point and such stop blocks were used on every occasion OB was dumped from the dumper, or a proper berm of adequate width and of a height not less than half the diameter of the dumper-wheels (and in any case not less than 1.0 meters in height) been provided at the edge of the dump, as called for vide clause 11.1(b) of Directorate's letter No. 4028 dated 07.10.1983 granting relaxations from the provisions of Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961 read with clause 8.9(iv) of Appendix D of DGMS Circular No. Tech 1 of 1989, and

iii) the Code of Practice for prevention of injuries to persons engaged in dumping of overburden been strictly enforced, as called for vide clause 4 of Directorate's letter No. 4028 dated 07.10.1983 granting relaxations from the provisions of Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961, read with clause 3.1 & 3.2 of Appendix D of DGMS Circular No. Tech 1 of 1989,

this accident could have been averted.

15. Date - 15.11.17
Time - 11.15

Mine - PANCHPATMALI BAUXITE MINE
Owner - NATIONAL ALUMINIUM CO.
Dist. - Koraput, State - Orissa
Person(s) Killed :
1. P.C.Mohanta, Engineer (Mech.), Male, 58
Years

While a dumper was taking a right turn to proceed to the mine after unloading bauxite in the stock-pile/ hopper area, it was suddenly turned to left on being signaled to proceed towards the diesel filling point on the left side, and in the process, collided head-on with a light vehicle coming in the opposite direction with three persons inside, trapping it under the front side bumper, crushing it & dragging for about 5 meters before coming to halt, inflicting thereby serious bodily injuries to two persons of whom, one succumbed instantaneously.

Had,

i) the dumper operator carefully examined the haul road in front before turning to left and ensured that there is no person present in front of the moving dumper whose safety is likely to be endangered, that the proximity warning device was in working state and put on the indicator lights for turning left, thus not negligently omitting to do for the safety of the persons employed in the mine, as required by the provisions of Regulation 41(1)(a) of Metalliferous Mines Regulations, 1961 read with condition No.-17.0 and 20.0 of the exemption granted vide letter No.BBR/KO/BA-1/P-106(2)(b)/2014/2704 dated 24.09.2014,

ii) the driver of light vehicle waited at a safe distance for the dumper in front to pass by and not driven the vehicle on the wrong side to in front of the turning dumper, as required by the provisions of Regulation 41(1)(a) of Metalliferous Mines Regulations, 1961 read with condition 20.0 of the exemption granted vide letter No.BBR/KO/BA-1/P-106(2)(b)/2014/2704 dated 24.09.2014 and traffic rules framed by the manager of the mine, and

iii) a proper arrangement of safe traffic control for diverting dumpers for diesel filling been devised and implemented instead of the prevailing system of signaling the operators of dumper only and not of any other vehicle passing in the area, thus not negligently omitting to do for the safety of the persons employed in the mine, as required by the provisions of Section 18(4) of the Mines Act, 1952 and Regulation 40(1) of Metalliferous Mines Regulations, 1961 read with condition 20.0 of the exemption granted vide letter No.BBR/KO/BA-1/P-106(2)(b)/2014/2704 dated 24.09.2014,

this accident would have been averted.

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

| | |
|---------------------|--|
| 16. Date - 01.04.17 | Mine - PURNADIH NAVADA STONE MINE |
| Time - 9.30 | Owner - VIRENDER KUMAR SINGH & ANUJ KUMAR SINGH |
| | Dist. - Koderma, State - Jharkhand |
| | Person(s) Killed : |
| | 1. Vasu Deo Yadav, Tipper Driver, Male, 40 Years |

While a stone loaded tipper was going up of an elevated haul road having 1 in 10 gradient in a stone quarry, it suddenly rolled back and fell down on to floor of the quarry along with its operator through a height of about 18-20m, crushing the operator to death.

Had,

this accident could have been averted.

This accident could have been averted.

negligently endangering life and safety of the persons, in contravention to the provisions of Regulation 98 of the Oil Mines Regulations, 1984, and

2) corroded and rusted jerk and safety wireline slings were not used and both had been tested as per IS:2762 of BIS 2009 to a proof load which is equivalent to twice its safe working load before being put to use at the Rig so as to ensure that they were of good construction and adequate strength as required by Clause 8 of IS:2762 of BIS 2009 read with Regulation 76 of the Oil Mines Regulations, 1984,

this accident could have been averted.

Code : 0443 Loading Machines
(3 Deaths)

19. Date - 10.01.17 Mine - SSSS(4S) BLUE METAL MINE
Time - 11.00 Owner - S. REX
Dist. - Thoothukkudi, State - Tamil Nadu
Person(s) Killed :
1. Vinoth Kumar, Poclain Optr., Male, 45 Years

While a Poclain Operator was trying to pull out a boulder, he lost control over the machine and due to which the machine started tilting, fearing which the operator jumped out of the machine to the next bench from a height of about 3m. Later on, the machine also overturned and fell on to the operator, as a result, the operator was stuck beneath the machine, thereby inflicting serious injuries, to which he succumbed on the spot.

Had,

i) the mine been worked properly by forming benches and adequately sloped, as required under Regulation 106(2) & (3) of the Metalliferous Mines Regulations, 1961,

ii) a duly qualified engineer being appointed in the mine to hold general charge of machinery deployed in the mine and ensure its maintenance for safe working as required under Regulation 36 of the Metalliferous Mines Regulations, 1961,

iii) a duly qualified manager being appointed for overall management, supervision, direction and control of the mine as required under Regulation 34 of the Metalliferous Mines Regulations, 1961, read with section 17 of the Mines Act, 1952,

iv) the mining mate being appointed and workings placed under the charge of mining mate as required under Regulation 39 read with Regulation 116 of the Metalliferous Mines Regulations, 1961, and

v) the foreman appointed been taken necessary step for the compliance of the provision made there under in the Act and Regulation to secure the safety of men & machine as required under Regulation 46(2) (b) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

20. Date - 27.02.17 Mine - JHANJHAR MARBLE MINE (M.L. 77/09)
Time - 12.30 Owner - M/S RAMA KRISHNA MARBLE

Dist. - Rajsamand, State - Rajasthan

Person(s) Killed :

1. Devilal, G. Mazdoor, Male, 22 Years

While a general mazdoor was helping in taking out link-pin from bucket of an excavator during its repairs, he got hit in his abdomen by movement of the bucket to receive serious bodily injuries to which he succumbed whilst undergoing treatment at hospital.

Had,

i) None been allowed to be present in close proximity of moving bucket of the excavator, thus not negligently endangering life and safety of persons engaged in its repair, as required by the provisions of Regulation 174(3) read with Regulation 181 of the Metalliferous Mines Regulations, 1961 and

ii) The repair work been properly supervised by the competent person to secure/ ensure maintenance of the excavator in a safe manner, as required by the provisions of Regulation 39(1) (a) of the Metalliferous Mines Regulation, 1961

this accident could have been averted.

21. Date - 26.07.17

Time - 9.15

Mine - MASARO KI OBRI SERPENTINE

Owner - MUMAL MARBLE

Dist. - Udaipur, State - Rajasthan

Person(s) Killed :

1. Vijender Singh, Worker, Male, 30 Years

While a worker was engaged in handling of marble block by excavator in the bottom most bench of the opencast mine near water logged pit; the excavator skidded due to slippery floor and fell into the pit which was waterlogged along with the worker drowning him in the water and subsequently he received multiple injuries and succumbed due to drowning. The body of the worker was recovered by the divers after 24 hours of drowning and he was found dead.

Had:

i) The person adhered to the Code of Practice of toppling of marble block and SOP of excavator and the excavator properly positioned by operating sufficiently distant from the edge of the pit and along the pit boundary not across thus not negligently committing unsafe act which caused the fall of excavator into the water logged pit, thereby omitting to ensure his own safety as required under Regulation 181 of the Metalliferous Mines Regulation, 1961.

ii) The mining mate observed the operating position of the excavator to be dangerous and instructed the operator to position properly away from the water logged pit in view of slippery mine floor and cautioned the worker about the consequences under Regulation 47(5) (a) of the Metalliferous Mines Regulations, 1961.

iii) The manager inspected the workplace personally in view of slippery floor which he negligently or willfully omitted for the safety of the worker deployed to operate the excavator as required under Regulation 181 of the Metalliferous Mines Regulation, 1961

this accident could have been averted.

 Code : 0449 Other Non-Transportation Machinery
 (5 Deaths)

22. Date - 13.01.17 Mine - ODWAS SERPENTINE MINE (M.L.NO.12/98)
 Time - 23.45 Owner - M/S JYOTI MINERAL PVT. LTD.
 Dist. - Udaipur, State - Rajasthan
 Person(s) Killed :
 1. Babulal Meena, Operator, Male, 45 Years

While a wire saw operator was operating the wire saw machine in an opencast marble mine, its wire rope snapped to hit the operator, who received serious injuries on his chest, which proved fatal to him after about 15-20 minutes no sooner he reached the hospital.

Had,

i) The drive pulley of the wire saw machine and the starter switch from where the machine is started/ stopped as well as the place where the operator is required to stand whilst the machine is in operation been suitably fenced with a safety guard of substantial construction to prevent person/ operator being hit by wire-rope, beads/ diamond segments and spring in case of breaking of wire-rope during running of the machine, as required in the provisions of Regulation 174(2) of Metalliferous Mines Regulations, 1961 read with condition no.9.4(3) of Directorate's letter no UR/Udaipur/NC/Per-106(2) (b)/5745, dated 29/12/2009 granting relaxations from the provisions of Regulation 106(2) (b) of the Metalliferous Mines Regulations, 1961, and,

ii) a foreman been appointed to hold the charge of the shift to see that all persons carried out their respective duties in a proper manner and ensure that the safety of the mine and the safety of the persons employed in the mine was secured, as required in the provisions of Regulation 37 of Metalliferous Mines Regulation, 1961,

this accident could have been averted.

23. Date - 31.01.17 Mine - SINDESAR KHURD GALENA & SPHALARITE
 Time - 17.20 Owner - HINDUSTAN ZINC LTD.
 Dist. - Rajsamand, State - Rajasthan
 Person(s) Killed :
 1. Harjit Singh, Rigger, Male, 36 Years
 2. L.S.Rao, Site incharge, Male, 35 Years
 3. Khageshwer Pati, Supervisor, Male, 46 Years
 4. S.K. Chandrawanshi, Crane Optr., Male, 40

Years

While a crew of 7 persons were engaged to place a fabricated roof shed structure over Fine Ore Bin at a height of 34 meters above the ground with the help of a crawler mounted crane, the lattice boom structure of the crane failed and the broken parts of lattice boom structure along with the lifted load, slings and hooks fell over 6 persons standing in the vicinity of the crane to receive serious bodily injuries. Three persons succumbed to their injuries almost instantaneously; another one person succumbed to his injuries after about 24 hours whilst undergoing treatment at hospital; and remaining two persons escaped with serious injuries.

Had,

i) The crane lattice boom structure been tested to ensure that it was in good condition and of adequate strength, and its safe working load been assessed in accordance with BIS 4573 of 1982 and BIS 13376 (Part 1) of 1992, as required by the provisions of Regulation 172 of Metalliferous Mines Regulations, 1961, read with and DGMS Circular No. 10/2002,

ii) the crane been not placed in a position where the crane operator was compelled to undertake a blind lift, and proper communication with walkie-talkie sets or other suitable means been provided between the riggers and the crane operator, thus not negligently putting to risk the life and safety of persons employed in the lift-up operations, as required by the provision of Regulation 181 of Metalliferous Mines Regulations 1961, and,

iii) multiple operation of the crane not been carried out simultaneously (swinging as well as lifting up of the boom and/or movement of the entire crane) to place the lifted load to its designated place, while the load was in lifted position (thus resulting in sudden rapid dynamic consequential load onto the main boom and luffing jib structure due to jerk/uncontrolled swinging of the lifted load), as mentioned in SOP No. HZL/ZSRP/ZONE-6/SOP/001 dated 06/09/2014 and clause no. 5-.2.1.5(3)(m) of manufacturer-supplied SOP, thus not negligently putting to risk the life and safety of persons employed in the lift-up operations, as required by the provision of Regulation 181 of Metalliferous Mines Regulations 1961,

this accident could have been averted.

Code : 0500 Explosives

Code : 0552 Deep Hole Blasting Projectiles
(1 Death)

24. Date - 12.11.17
Time - 17.30

Mine - G.S.R STONE CRUSHERS STONE QUARRY
Owner - G.S.R STONE CRUSHERS
Dist. - Srikakulam, State - Andhra Pradesh
Person(s) Killed :
1. J.Ramarao, Contract Workman, Male, 36 Years

While a blaster helper was testing blasting circuit with a Multimeter after connecting to a detonator with detonating cord at the top bench of an Opencast workings, fifteen charged holes got initiated and blasted, inflicting injuries to four persons out of which one person got trapped among the blasted boulders and died on the spot and remaining three escaped with minor injuries.

Had,

i) a duly qualified Manager been appointed for overall management, control, supervision and direction of the mine as required under Regulation 34 read with Section 17(1) of the Mines Act, 1952;

ii) a duly qualified blaster been appointed to carry out blasting operations as required under Regulation 160(2) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

 Code : 0554 Other Projectiles
 (1 Death)

25. Date - 06.04.17 Mine - MUGALUR STONE MINE
 Time - 16.45 Owner - THRU M.R SHIVALINGAPPA
 Dist. - Krishnagiri, State - Tamil Nadu
 Person(s) Killed :
 1. Nataraj, Worker, Male, 50 Years

While a person was returning from the working bench of an open-cast mine where drill holes were charged with explosives, it started raining with thunder storms and lighting due to which some of the charged holes got blasted due to lighting as a result of which he was fatally injured by the blasting projectiles.

Had,

a duly qualified manager been appointed and mine workings been placed under the charge of a mining mate as required under the provisions of 116(1) of the Metalliferous Mines Regulations, 1961.

all the persons other than blaster and his assistants in the vicinity been taken proper shelter before charging the drill holes and all exposed detonator lead wires are coiled up and placed in the mouth of the holes or kept covered by something other than a metal plate during lighting as required under the provisions of 164(1) and 106(2)(b) of the Metalliferous Mines Regulation, 1961 read with DG's Technical Circular No.1 of 1995,

the accident could have been averted.

 Code : 0559 Other Explosive Accidents
 (5 Deaths)

26. Date - 16.04.17 Mine - DHAWLA GRANITE MINE ML NO. 249/03
 Time - 16.30 Owner - AZIZ KHAN
 Dist. - Jalor, State - Rajasthan
 Person(s) Killed :
 1. Ramesh, Gen. Mazdoor, Male, 40 Years
 2. Jeta Ram, Gen. Mazdoor, Male, 30 Years
 3. Mahendra, Gen. Mazdoor, Male, 20 Years

While three persons were drilling and charging shot hole simultaneously on the bench of the opencast mine, suddenly the explosive/detonating cord exploded, causing serious injury to all, later to which they succumbed.

Had,

The working of the mine been placed, under the supervision of a duly qualified person appointed as manager, thus not negligently endangering the life and safety of the work persons employed in the mine, as required under the provisions of Sec.18(4) of the Mines Act,1952 read with read with Reg.34(1) of the Metalliferous Mines Regulations,1961,

The charging of holes been carried out by or under the personal supervision of a competent person/blaster, thus not negligently endangering the life and safety of the work persons employed in the mine, as required under the provisions of Regulation 160(1) of the Metalliferous Mines Regulations,1961.

The working in the mine not being carried out in contravention of prohibitory order under section 22(3) of the Mines Act,1952, issued by this Directorate, thus not negligently endangering the life and safety of the work persons employed in the mine, as required under the provisions of Sec.18(4) of the Mines Act,1952.

The explosive being used at the mine, been provided by the Owner,as required under the provisions of Sec.18(4) of the Mines Act,1952 read with Regulation 153 of the Metalliferous Mines Regulations,1961.

this accident could have been averted.

27. Date - 15.06.17
Time - 13.45

Mine - KHAN STONE QUARRY

Owner - MUSAROF HUSSAIN KHAN

Dist. - Birbhum, State - West Bengal

Person(s) Killed :

1. Abdul Hadi,Drilling Helper, Male, 22 Years
2. Badhynath Hansda, Drilling Helper, Male, 26

Years

While four persons were stemming and making connection of shot holes in an opencast stone mine, the induced charge from sudden lighting resulted premature blasting of the charged shot holes, inflicting serious bodily injuries to all of them but two of them succumbed to their injuries at a hospital after 1 1/2 hours and 2 3/4 hours of the accident.

Code : 0600 Electricity

Code : 0661 Overhead Lines
(1 Death)

28. Date - 26.08.17
Time - 11.05

Mine - VYASNAKERI IRON ORE MINE

Owner - MINERAL SALES PVT. LTD.

Dist. - Bellary, State - Karnataka

Person(s) Killed :

1. Shamsher Ansari, Driver, Male, 29 Years

While a tipper driver was checking the bottom of tipper for abnormal sound, on a haul road leading to weigh bridge, tipper helper lifted the bucket of tipper which came in contact with the 11KV overhead line and tipper driver got electric shock and died on the way to Hospital.

Had,

i) The bucket of tipper not lifted under 11KV overhead line negligently which likely to endangering the life of persons employed there in as required under the provisions of Regulation 181 of Metalliferous Mines Regulations, 1961,

ii) The minimum clearance above ground of the lowest conductor of 11KV overhead line was maintained not less than twelve meters in height from the ground across the road where dumpers or trackless vehicles cross, as required under the provisions of Regulations 97(4) of The Central Electricity Authority (measures relating to safety and electric supply) Regulations, 2010,

iii) The tipper driver was allowed to enter the mine with wearing proper safety shoes as required under the regulation 182(1) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

Code : 0664 Energized Machines
(2 Deaths)

29. Date - 11.10.17 Mine - ITAGI LIMESTONE MINE
Time - 15.00 Owner - ORIENT CEMENT LTD.
Dist. - Kalaburagi (Formerly-GULBERGA), State -
Karnataka
Person(s) Killed :
1. M.Diggi, Helper, Male, 42 Years
2. Mahesh, Helper, Male, 21 Years

While two helpers were trying to dewater the stagnated rain water from a pit over the HSD tank by keeping electrical mono block pump at the edge of the pit, the pump fell into the water, cable got disconnected from the motor and charged the stagnated water with 230V power, electrocuting both of them, who in turn fell and drowned in the water.

Had,

1) the dewatering work was monitored by a supervisor as required under the provisions of Regulation 43 of The Metalliferous Mines Regulations, 1961,

this accident could have been averted.

Code : 0800 Falls (Other than Falls of Ground)

Code : 0881 Fall of Person from Height/into Depth

(6 Deaths)

30. Date - 20.01.17 Mine - CHIKLA MANGANESE MINE
 Time - 11.30 Owner - MANGANESE ORE [INDIA] LTD.
 Dist. - Bhandara, State - Maharashtra
 Person(s) Killed :
 1. D.T.Sonwane, Contract worker, Male, 31 Years

While clearing a jammed pipe used for concrete lining in a vertical sinking shaft by hammering at a loosened pipe joint, by work persons standing on scaffold at a height of 21 m from the shaft bottom, the jam got cleared releasing water at high pressure which caused one of the workers to fall down to the shaft bottom, inflicting serious bodily injury to him to which he succumbed while being transported to hospital.

Had,

i) safety belt been used while working on the scaffold, where there was danger of falling down 21m to the shaft bottom, thereby not endangering his life as required under Regulation 181 of the Metalliferous Mines Regulations 1961 and

ii) the scaffold platform been kept in ON position to cover the whole area of the shaft and not allow space for a person to fall overboard, thereby not endangering his life as required under Regulation 181 of the Metalliferous Mines Regulations 1961,

this accident could have been averted.

31. Date - 20.03.17 Mine - PAVITA DHARTI STONE QUARRY
 Time - 13.15 Owner - M/S PAVITA DHARTI STONE WORKS
 Dist. - Koderma, State - Jharkhand
 Person(s) Killed :
 1. Gopal Singh, Driller, Male, 35 Years

While a driller was drilling shot holes with jack hammer drill in an opencast stone mine, standing on a ledge of 0.7m wide and 3.5m high, without anchoring his safety belt, he had lost balance in the process and fell down through a height of 3.5m, sustaining serious bodily injuries, to which he succumbed in the hospital.

Had,

the driller coupled/attached the safety belt, worn by him, to anchor rope, thus not negligently endangering his own life as required under regulation 181 of the MMR 1961,

and the mine manager, ensured that the driller attached/coupled, Safety belt provided to him to anchor rope, during subsequent drilling, thus ensuring Safety in every respect, as required under regulation 44(1) (a) of the MMR 1961,

this accident could have been averted.

32. Date - 24.04.17 Mine - GUNAWATI RANGE MARBLE (Q.N. 171/01)
 Time - 11.30 Owner - KALAMUDDIN AND BROS
 Dist. - Nagaur, State - Rajasthan
 Person(s) Killed :
 1. Kanaram Gurjar, Worker, Male, 35 Years

While a worker was working in a marble opencast mine (QL No.171) on an intermediate unfenced platform made in the footwall, suddenly rope of the hoisting jib crane broke into two pieces and he was hit by the recoil of the broken rope as to fall down into the quarry through a height of about 23m to receive serious bodily injury and died.

Had

i) the mine not been operated in contravention of Prohibitory Order under Section 22(3) of the Mines Act, 1952 issued vide this Directorate's letter No.AJ/DMS/22(3)/2006/7530, dated 24.11.2006 as required under Section 18(4) of the Mines Act, 1952.

ii) the mine been placed under the charge of a manager holding prescribed qualifications as to ensure that all work in the mine was carried on in accordance with the provisions of the Mines Act, and of the Regulations, rules, bye laws and orders made there-under, whereby safety of the mine as well as life and safety of persons employed in the mine could be ensured in every respect, as required by the provisions of Section 17(1) of the Mines Act, 1952, read with Regulation 34(1) of the Metalliferous Mines Regulation, 1961.

iii) A mining mate been appointed to personally supervise operations connected with the mine and ensure proper observance of the provisions of the Mines Act, 1952 and of the rules and Regulations framed there-under, whereby safety of the mine as well as life and safety of persons employed in the mine could be ensured in every respect, as required to be appointed under Regulation 116 of the Metalliferous Mines Regulation, 1961 and

iv) All parts, working gear and lifting rope of the crane, and all foundations in or to which such crane was anchored to or fixed, were of good construction and adequate strength and were properly maintained as required by Reg. 172 of the MMR, 1961.

this accident could have been averted.

33. Date - 28.06.17
Time - 9.00

Mine - SRINIVASA STONE CRUSHER MINE
Owner - NADENDLA SRINIVASA RAO
Dist. - Krishna, State - Andhra Pradesh
Person(s) Killed :
1. Jony Dhamu, Driller, Male, 34 Years

While a group of three persons were drilling holes, standing on a ledge in a near vertical side of about 30m height by tying with ropes anchored at top of an quarry, a loose boulder slid from upper portion of the quarry & snapped one of the ropes resulting in loss of control to that person and he fell on the bottom of the quarry from a height of about 6m receiving serious injuries, to which he succumbed after eight days during treatment in the hospital.

Had,

i) a duly qualified manager was appointed to have overall management, control, supervision and direction of the mine as required under Section 16 of the Mines act, 1952 read with the Regulation 34(1) and

ii) proper bench been made with height not more than 6m and width not less than the height & the sides been kept adequately secured and free from loose as required under the Regulation 106(2)(a) & (3) of the Metalliferous Mines Regulation, 1961

this accident could have been averted.

34. Date - 02.12.17 Mine - CODLI IRON/ORE MINE
 Time - 16.45 Owner - SESA MINING CORPORATION LTD.
 Dist. - South Goa, State - Goa
 Person(s) Killed :
 1. M.Anant Naik, Ripper-D.Operator, Male, 42
 Years

While a person was dozing the muck at top of over burden dump which was over and above water logged pit, suddenly a portion of dump measuring about 107mtrs (Length) x 29.8mtrs (Width) x 50mtrs (Height) slithered and collapsed burying the operator deployed, he was recovered dead 78hrs later.

Had,

a. The overburden dump suitably terraced with a height of each terrace not more than 10mtrs and width of terrace not less than 20mtrs with slopping side and continuously monitor the dump for any unsafe conditions as per permission issued under the Regulation 106(2)(b) of MMR 1961, and

b. The dump not continued over a low lying weak ground water logged pit by following the recommendations of scientific study and recommendations 7th National conference on Safety in Mines and

c. The Assistant Manager not failed to withdrawn the persons on finding the development of cracks thus creating dangerous condition and thus not negligently omitting his duties and responsibilities to ensure the safety of the persons employed on dump as required under Regulation 45(1), 45(2), 43(3), 106(2)(b) & 181 of MMR 1961, and

d. The owner, Agent and Mine Manager thus not negligently omitted to comply the provisions of Act, Regulations, Rules, bye-laws and orders made thereunder as per section 18(4) of Mines Act 1952 and not negligently omitting to ensure the safety of work persons employed in the mine, as required regulations 181 of MMR 1961,

this accident could have been averted.

35. Date - 10.12.17 Mine - SATYA STONE CRUSHER MINE
 Time - 13.45 Owner - BOTCH SRIDHAR
 Dist. - Vizianagaram, State - Andhra Pradesh
 Person(s) Killed :
 1. P.Adhinarayana, Mazdoor, Male, 43 Years

While a group of three persons were cleaning the blasted stone on the ledge of about 2m wide on the side of a near vertical bench of about 35m by using hand tools like crow-bars and hand shovels for making place for drilling of blast holes, one of the persons, slipped and fell down to the bottom of the quarry from a height of about 15m and received serious injuries, to which he succumbed almost instantaneously.

Had,

i) a duly qualified manager was appointed to have overall management, control, supervision and direction of the mine as required under Regulation 34(1) read with Section 17 of the Mines Act, 1952 and

ii) a duly qualified mining mate was appointed to ensure the use of the life line while working at heights as required under Regulation 116(1) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

Code : 0882 Fall of Persons on the Same Level
(2 Deaths)

36. Date - 28.04.17 Mine - SALAIYA LIMESTONE MINE
Time - 5.25 Owner - RELIANCE ORNATUS ENTERPRISES & VENTURES
Dist. - Satna, State - Madhya Pradesh
Person(s) Killed :
1. Vishnu Yadav, Contract Employee, Male, 42
Years

While a shovel operator was walking on the side girder of a weighbridge platform after getting down from a loaded tipper, standing for weighing in an opencast limestone mine, apparently taking support of the same, the tipper moved forward, due to which he lost balance and fell on the weigh bridge side girder causing him internal injuries & he succumbed during treatment after about 3 and half hours.

Had,

the persons employed in the mine adhered strictly to the provisions of the Mines Act & of the Regulation and orders made thereunder & unauthorized persons were not allowed to ride on the tipper thereby not negligently omitted a thing necessary for the safety of persons employed therein as required under Regulation 41(1) (a), read with condition no.14.0(4) of the permission granted under Regulation 106(2) (b) of the Metalliferous Mines Regulations, 1961, issued vide Directorate's letter no.4118, Jabalpur, dated 27.12.2016 and Regulation 181 of the Metalliferous Mines Regulation, 1961,

Unauthorized persons were not allowed to ride on the tipper, thereby taking all possible steps to ensure that every official understands, carried out and enforced the provisions contained in the Regulations and seen that all work is carried out in accordance with provisions of the Mines Act, Regulations and orders made thereunder as required under Regulation 44(4) & Regulation 45(1) of the Metalliferous Mines Regulations, 1961 read with condition no.14.0 (4) of the permission granted under Regulation 106 (2) (b) of the Metalliferous Mines Regulations, 1961, issued vide Directorate's letter no.4118, Jabalpur, dated 27.12.2016.

this accident could have been averted.

37. Date - 27.06.17 Mine - MORWAR MARBLE MINE
Time - 21.15 Owner - M/S J K NATURAL MARBLE LTD.
Dist. - Udaipur, State - Rajasthan
Person(s) Killed :

1. J.Kr. Sharma, Driller, Male, 28 Years

While a person turned on the ignition key to start a tractor mounted with drill machine, by keeping himself on the floor of quarry bench i.e. without seating over the pilot seat, the tractor started moving in forward direction and his leg got entrapped into the wheel, thus befallen him. Before he could escape, tractor ran over his body and fell onto the immediate lower bench. The man received serious bodily injury to which later he succumbed.

Had the tractor machine not been operated by an unauthorized person thus negligently endangering his own life and safety in the mine & the ignition key of the tractor machine been retained at the end of shift by the tractor operator authorized to drive it, thus preventing unauthorized operation by any person other him so as to ensure life and safety of work person employed in the mine as required under the provisions of the Regulation 181 of the Metalliferous Mines Regulations, 1961.

Had a system been evolved to prevent unauthorized driving whereby the ignition key and or cabin key always remain with driver operator or with specifically designated competent person, thus negligently endangering the life and safety of the work persons employed in the mine as required under the provisions of the Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961 read with Condition no. 13.0 (d) of Permission no 288 dt. 19.01.2009

Had the movement of tractor, positioning of tractors for stability and drilling of holes been carried out in accordance with provisions of Act and of regulations and orders made there under and taken reasonable means to ensure safety of the work persons at work, as required under the provisions of Sec. 18(5) of the Mines Act read the Regulation 45(1), 47(1)(b) read with condition no 17.0(2) of Permission no 288 dt. 19.01.2009 granted under regulation 106(2)(b) the Metalliferous Mines Regulations, 1961

This accident could have been averted.

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

38. Date - 24.01.17
Time - 9.00

Mine - OSTAPAL CHROMITE MINES
Owner - FERRO ALLOYS CORPN. LTD.
Dist. - Jajpur, State - Orissa
Person(s) Killed :

1. Bhima Champia, Cont. Worker, Male, 54 Years

While a person was fixing a flexible water hose to a point provided at the base of a masonry water tank, suddenly the water tank collapsed and broken pieces of one of the side wall fell on to the person causing grievous injuries to legs, to which he is succumbed after about three hours thirty minutes

Had, the water tank been constructed and maintained effectively, thus not negligently omitting to do anything for the safety of persons as required by the provisions of Regulations 42, 44(1)(a) and 181 of the Metalliferous Mines Regulations, 1961,

the accident could have been averted.

39. Date - 17.03.17
Time - 12.00

Mine - PACHAPALAYAM ROUGH STONE MINE
Owner - E. ANANTHAKUMAR
Dist. - Coimbatore, State - Tamil Nadu
Person(s) Killed :
1. Balu A. Balan, Driller, Male, 50 Years
2. Sakthivel, Driller, Male, 39 Years

While three persons were drilling holes with Jackhammer drill machine on a overburdden bench, a big chunk of boulder measuring about 4.5m long, 1.8m wide and 0.6m thick, dislodged from the side and fell from a height of about 4.2m and hit the persons, inflicting serious bodily injuries to which two persons succumbed in the hospital on the same day and one person escaped with minor injuries.

Had,

i) the mine been worked properly by forming benches and adequately sloped, as required under Regulation 106(2) & (3) of the Metalliferous Mines Regulations, 1961,

ii) the sides of the bench been dressed properly before employing persons at the bottom of the bench as required under Regulation 106(3) of the Metalliferous Mines Regulation 1961 and

iii) A duly qualified manager being appointed for overall management, supervision, direction and control of the mine as required under Regulation 34 of the Metalliferous Mines Regulations, 1961, read with section 17 of the Mines Act, 1952, and

iv) the mining mate being appointed and workings placed under the charge of mining mate as required under Regulation 39 read with Regulation 116 of the Metalliferous Mines Regualtions, 1961,

this accident could have been averted.

40. Date - 09.05.17
Time - 12.50

Mine - SRI SRINIVASA GRANITE MINE
Owner - SRINIVASA GRANITE
Dist. - Prakasham, State - Andhra Pradesh
Person(s) Killed :
1. S.Palani, Manager, Male, 50 Years
2. K.Rahamtulla, Non Employee, Male, 35 Years
3. P.Rithvik, Non Employee, Male, 12 Years

While an official and two non-employees were taking rest behind a mineral granite block of size 2.8m (height) x 1.8m x 1.2m (base) at a bench of an opencast mine, suddenly the rear end of the excavator working on the other side of the granite block which fell down and all the three were pressed under it and two of them died instantly and one died while being taken to the hospital.

Had,

i) the working area of operation of the excavator engaged at the mine been kept safe and free of all obstruction & workings around it were not kept congested with granite blocks as required under Reg. 181 of Metallifereous Mines Regulation, 1961 and the deceased were not allowed within the swing radius of excavator as required under condition No. 19.1(b) of the Permission letter No. HR2/SCZ/106(2) (b)/65(17)/2017/1042 dated 23-03-2017 granted under Reg. 106(2) (b) of Metalliferous Mines Regulation, 1961.

ii) Granite blocks were not kept standing along the longer side over its narrow base so as to prevent its falls with light impact as required under Reg. 181 of Metalliferous Mines Regulation 1961.

iii) Gates, fences were provided and maintained at the mine or other suitable arrangement were made to prevent any unauthorised entry into the mine as required under Reg. 115 r.w Reg. 56 of Metalliferous Mines Regulation 1961 r.w Sec. 45 of Mines Act 1952,

this accident could have been averted.

| | |
|-------------------------------------|--|
| 41. Date - 12.12.17 Time - 12.45 | Mine - MAHESHWARI MANGANESE MINE Owner - S. K. SARAWAGI & CO. PVT. LTD. Dist. - Vizianagaram, State - Andhra Pradesh Person(s) Killed : 1. L.Anjaiah, Helper, Male, 55 Years 2. M.V.Rao, Helper, Male, 33 Years |
|-------------------------------------|--|

While a group of four persons were installing a pump at the bottom of an opencast manganese mine, located at a distance of about 3m from the toe of a slope of an overburden bench having height of about 12m, suddenly a loose boulder of approximate size of 1m x 1m x 0.5m rolled from the slope, broke into pieces and hit two of them, who received serious injuries to which they succumbed almost instantaneously and the other two escaped unhurt.

Had, the side of the working place was carefully examined and kept secured by removing the loose boulders, before engaging persons at the workplace, as required under Regulations 112(1) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

Code : 0889 Other Accidents due to Falls
(1 Death)

| | |
|-------------------------------------|--|
| 42. Date - 26.06.17 Time - 11.00 | Mine - NAGANUR MULTICOLOUR G/M Owner - G.V. GRANITES Dist. - Karur, State - Tamil Nadu Person(s) Killed : 1. Ranjan Gouda, G.Mazdoor, Male, 36 Years |
|-------------------------------------|--|

While a crane operator was arranging the scattered granite blocks measuring about 3.35m X 1.98m X 1.5m by lifting the same with the help of a crane at the stock yard of an opencast mine, a crew member who had gone for urination, while returning back to the same workplace, suddenly came within the swing area of the crane and got caught between two granite blocks, sustaining serious injuries to which he succumbed on the way to hospital.

Had,

i) the Crane Operator been more vigilant and ensured that no person had entered into the swing area of the crane, thus negligently or wilfully not endangering the life of the persons employed therein as required under Regulation 181 of the Metalliferous Mines Regulations, 1961,

ii) the Supervisor been more vigilant and ensured that no person shall enter into the swing area of the crane while crane was under operation, thus negligently or wilfully not omitted to do anything necessary for the safety of the persons employed therein as required under Regulation 181 of the Metalliferous Mines Regulations, 1961, and

iii) the Mining Mate been more vigilant and ensured that all the entrances to every place which are not in actual use, fenced across the whole width so as to prevent persons from inadvertently entering such place as required under Regulation 47(5)(c), 3(a) of the Metalliferous Mines Regulations, 1961, and not allowed the persons to enter into the swing area of the crane, thereby willingly or negligently endangering the safety of life of the persons employed therein Regulation 181 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.



2018



5. ACCIDENT ANALYSIS IN NON-COAL MINES: 2018

- The number of fatal accidents in non coal mines in the year 2018 stands at 45(Including 2 accident in Oil Mine) with 51(Including 2 fatalities in Oil Mine) fatalities and 12 seriously injured persons (Including 2 injuries in Oil Mine) in these fatal accidents. The number of fatal accidents has increased as compared to previous year 2017.
- The number of serious accidents in the year 2018 stands at 26(including 4 serious accidents in Oil Mine) with 26 (including 4 serious injuries in Oil Mine) seriously injured persons in these serious accidents. The number of serious accidents has increased as compared to previous year 2017.
- Among the broad category of causes, most number of fatal accident occurred due to “Fall of sides (other than overhangs)”. However, most number of serious accident occurred due to “Fall of persons from height/into depth”. Details can be seen in the statement 5.2.
- Maximum number of fatal accidents occurred in Stone Mines whereas maximum number of serious accidents occurred in Iron and Galena & Sphalarite Mine. Details can be seen in the statement 5.1.
- Maximum number of fatal accident occurred in the mines in each of the zones i.e Northern Zone, North western Zone and South Central Zone of this Directorate and maximum number of serious accident occurred in Western Zone of this Directorate.
- Major Accident: No Major accident was reported during the year.

STATEMENT 5.1

Accidents and placewise casualties in non-coal mines by state-district wise in 2018

| 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 | M | F | M | F | | M | M | F | M | F | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 1. | Oil | | | | | | | | | | | | | | |
| | Assam | | | | | | | | | | | | | | |
| | Dibrugarh | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| | Sibsagar | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 |
| | TOTAL : ASSAM | 2 | 1 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 2 | 0 | 3 |
| | Gujarat | | | | | | | | | | | | | | |
| | Ahmedabad | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | TOTAL : GUJARAT | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | Rajasthan | | | | | | | | | | | | | | |
| | Barmer | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| | TOTAL : RAJASTHAN | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| | ALL INDIA : OIL | 2 | 4 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 5 | 0 | 6 |
| 2. | Apatite & Rock Phosphate | | | | | | | | | | | | | | |
| | Rajasthan | | | | | | | | | | | | | | |
| | Udaipur | 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 |

| | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ALL INDIA : APATITE & ROCK PHOSPHATE | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3. China Clay, Clay, White-clay | | | | | | | | | | | | | | |
| Andhra Pradesh | | | | | | | | | | | | | | |
| West Godavari | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : ANDHRA PRADESH | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : CHINA CLAY, CLAY, WHITE-CLAY | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4. Chromite | | | | | | | | | | | | | | |
| Orissa | | | | | | | | | | | | | | |
| Jajpur | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| TOTAL : ORISSA | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| ALL INDIA : CHROMITE | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 5. Copper | | | | | | | | | | | | | | |
| Madhya Pradesh | | | | | | | | | | | | | | |
| Balaghat | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 3 |
| TOTAL : MADHYA PRADESH | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 3 |
| ALL INDIA : COPPER | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 3 |
| 6. Dolomite | | | | | | | | | | | | | | |
| Telangana | | | | | | | | | | | | | | |
| Khammam | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| TOTAL : TELANGANA | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| ALL INDIA : DOLOMITE | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 7. Galena & Sphalarite | | | | | | | | | | | | | | |
| Rajasthan | | | | | | | | | | | | | | |
| Udaipur | 3 | 3 | 2 | 0 | 0 | 1 | 0 | 3 | 2 | 0 | 0 | 2 | 0 | 4 |

| | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rajsamand | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 2 |
| TOTAL : RAJASTHAN | 4 | 5 | 3 | 0 | 0 | 1 | 0 | 4 | 3 | 0 | 0 | 3 | 0 | 6 |
| ALL INDIA : GALENA & SPHALARITE | 4 | 5 | 3 | 0 | 0 | 1 | 0 | 4 | 3 | 0 | 0 | 3 | 0 | 6 |
| 8. Gold | | | | | | | | | | | | | | |
| Karnataka | | | | | | | | | | | | | | |
| Raichur | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 3 |
| TOTAL : KARNATAKA | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 3 |
| ALL INDIA : GOLD | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 3 |
| 9. Granite | | | | | | | | | | | | | | |
| Andhra Pradesh | | | | | | | | | | | | | | |
| Prakasham | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : ANDHRA PRADESH | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| Telangana | | | | | | | | | | | | | | |
| Warangal Rural | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : TELANGANA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Uttar Pradesh | | | | | | | | | | | | | | |
| Varanasi | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : UTTAR PRADESH | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| ALL INDIA : GRANITE | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 0 | 1 | 0 | 0 | 0 | 1 |
| 10. Iron | | | | | | | | | | | | | | |
| Chhattisgarh | | | | | | | | | | | | | | |
| Rajnandgaon | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dantewara | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 4 |
| TOTAL : CHHATTISGARH | 1 | 4 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 4 |

| | | | | | | | | | | | | | | |
|---------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jharkhand West Singhbhum | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : JHARKHAND | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| Karnataka Bellary | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : KARNATAKA | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Orissa Keonjhar | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : ORISSA | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Rajasthan Bhilwara | 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 |
| ALL INDIA : IRON | 4 | 5 | 0 | 4 | 0 | 1 | 0 | 5 | 0 | 3 | 0 | 3 | 0 | 6 |
| 11. Limestone Chhattisgarh Durg | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| TOTAL : CHHATTISGARH | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Madhya Pradesh Satna | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : MADHYA PRADESH | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Orissa Sundergarh | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : ORISSA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : LIMESTONE | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 |

| | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|----|---|---|---|---|---|---|
| 12. Manganese | | | | | | | | | | | | | | |
| Maharashtra | | | | | | | | | | | | | | |
| Nagpur | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : MAHARASHTRA | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| <hr/> | | | | | | | | | | | | | | |
| ALL INDIA : MANGANESE | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| <hr/> | | | | | | | | | | | | | | |
| 13. Marble | | | | | | | | | | | | | | |
| Rajasthan | | | | | | | | | | | | | | |
| Ajmer | 3 | 0 | 0 | 2 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 2 | 0 | 2 |
| Alwar | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Banswara | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dungarpur | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nagaur | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rajsamand | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : RAJASTHAN | 9 | 0 | 0 | 9 | 0 | 1 | 0 | 10 | 0 | 0 | 0 | 2 | 0 | 2 |
| <hr/> | | | | | | | | | | | | | | |
| ALL INDIA : MARBLE | 9 | 0 | 0 | 9 | 0 | 1 | 0 | 10 | 0 | 0 | 0 | 2 | 0 | 2 |
| <hr/> | | | | | | | | | | | | | | |
| 14. Sillimanite | | | | | | | | | | | | | | |
| Kerala | | | | | | | | | | | | | | |
| Kollam | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : KERALA | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| <hr/> | | | | | | | | | | | | | | |
| Orissa | | | | | | | | | | | | | | |
| Ganjam | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : ORISSA | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| <hr/> | | | | | | | | | | | | | | |
| ALL INDIA : SILLIMANITE | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| <hr/> | | | | | | | | | | | | | | |
| 15. Slate | | | | | | | | | | | | | | |
| Andhra Pradesh | | | | | | | | | | | | | | |
| Prakasham | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : ANDHRA PRADESH | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ALL INDIA : SLATE | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16. Steatite | | | | | | | | | | | | | | |
| Rajasthan | | | | | | | | | | | | | | |
| Pratapgarh | 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 |
| ALL INDIA : STEATITE | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17. Stone | | | | | | | | | | | | | | |
| Andhra Pradesh | | | | | | | | | | | | | | |
| Guntur | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kurnool | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 3 |
| TOTAL : ANDHRA PRADESH | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 3 |
| Jharkhand | | | | | | | | | | | | | | |
| Koderma | 4 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pakur | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : JHARKHAND | 5 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| Karnataka | | | | | | | | | | | | | | |
| Chikkaballapur | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : KARNATAKA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| Kerala | | | | | | | | | | | | | | |
| Ernakulam | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : KERALA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rajasthan | | | | | | | | | | | | | | |
| Dausa | 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 |
| Telangana | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|-----------------------------------|----|----|---|----|---|---|---|----|---|----|---|----|---|----|
| Peddapalli | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : TELANGANA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : STONE | 11 | 0 | 0 | 13 | 0 | 0 | 0 | 13 | 0 | 4 | 0 | 0 | 0 | 4 |
| 18. Atomic Mineral | | | | | | | | | | | | | | |
| Jharkhand | | | | | | | | | | | | | | |
| East Singhbhum | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : JHARKHAND | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : ATOMIC MINERAL | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : ALL NON-COAL MINERALS | 45 | 26 | 6 | 38 | 2 | 5 | 0 | 51 | 7 | 13 | 1 | 17 | 0 | 38 |

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

Number of accidents and casualties/seriously injured persons in non-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 |
| Galena & Sphalarite | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 |
| Manganese | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : FALL OF ROOF | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | 0 | 0 |
| Galena & Sphalarite | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| Granite | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 |
| Marble | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| Slate | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 |
| Atomic Mineral | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| TOTAL : FALL OF SIDES (OTHER THAN OVERHANGS) | 2 | 3 | 0 | 1 | 1 | 6 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 12 | 1 | 1 | 1 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : FALL OF OVERHANGS | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Marble | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : PREMATURE COLLAPSE OF WORKINGS/PILLARS | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : GROUND MOVEMENT | 5 | 6 | 1 | 1 | 1 | 8 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 17 | 2 | 1 | 1 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : OVERWINDING OF CAGES/SKIP ETC. (UPGOING) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : TRANSPORTATION MACHINERY (WINDING) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Gold | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : OTHER RAIL TRANSPORTATION | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Copper | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| Steatite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 |
| TOTAL : DUMPERS | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 2 | 0 | 0 |

| | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Apatite & Rock Phosphate | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| Marble | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : WHEELED TRACKLESS (TRUCK, TANKER, ETC.) | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| TOTAL : TRANSPORTATION MACHINERY (NON-WINDING) | 0 | 0 | 0 | 0 | 0 | 9 | 9 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 9 | 9 | 2 | 1 | 1 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Marble | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : CUTTING MACHINES | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : LOADING MACHINES | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| China Clay, Clay, White-clay | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : 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 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : CRUSHING & SCREENING PLANTS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Copper | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Galena & Sphalarite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Iron | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 0 |
| TOTAL : OTHER HEAVY EARTH MOVING MACHINERY | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 3 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 3 | 5 | 3 | 1 | 1 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| TOTAL : MACHINERY OTHER THAN TRANSP. MACHINERY | 0 | 0 | 0 | 0 | 0 | 6 | 8 | 3 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 7 | 9 | 3 | 2 | 2 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Galena & Sphalarite | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : OTHER EXPLOSIVE ACCIDENTS | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| TOTAL : EXPLOSIVES | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : OTHER ELECTRICAL ACCIDENTS | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| TOTAL : ELECTRICITY | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 1 | 1 | 2 | 0 | 0 |
| TOTAL : EXPLOSION/IGNITION OF GAS/DUST ETC. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 1 | 1 | 2 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| TOTAL : DUST, GAS & OTHER COMBUSTIBLE MATERIAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 1 | 1 | 2 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|----|----|---|---|---|---|---|---|----|----|----|----|----|----|----|
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Chromite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Copper | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Galena & Sphalarite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Iron | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 2 | 2 |
| Marble | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Sillimanite | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Stone | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 |
| TOTAL : FALL OF PERSON FROM HEIGHT/INTO DEPTH | 0 | 0 | 0 | 2 | 2 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 6 | 6 | 0 | 7 | 7 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Chromite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Galena & Sphalarite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Gold | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Iron | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| Marble | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| TOTAL : FALL OF OBJECTS INCL. ROLLING OBJECTS | 0 | 0 | 0 | 1 | 1 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 0 | 2 | 2 | 4 | 4 | 1 | 4 | 4 |
| Manganese | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Marble | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 2 | 2 | 2 | 0 | 0 |
| Sillimanite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : OTHER ACCIDENTS DUE TO FALLS | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
| ----- | | | | | | | | | | | | | | | | | | | | |
| TOTAL : FALLS (OTHER THAN FALL OF GROUND) | 0 | 0 | 0 | 4 | 4 | 10 | 10 | 1 | 1 | 1 | 2 | 2 | 2 | 8 | 8 | 12 | 12 | 3 | 13 | 13 |
| ----- | | | | | | | | | | | | | | | | | | | | |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : BURIED IN SANDS, ETC. | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 3 | 3 |
| Dolomite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Galena & Sphalarite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : UNCLASSIFIED | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 8 | 9 |
| ----- | | | | | | | | | | | | | | | | | | | | |
| TOTAL : OTHER CAUSES | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 3 | 3 | 0 | 0 | 0 | 5 | 5 | 1 | 1 | 0 | 8 | 8 |
| ----- | | | | | | | | | | | | | | | | | | | | |
| ALL INDIA : ALL NON-COAL MINERALS | 5 | 6 | 1 | 6 | 6 | 35 | 40 | 7 | 7 | 7 | 5 | 5 | 4 | 13 | 13 | 45 | 51 | 12 | 26 | 26 |
| ----- | | | | | | | | | | | | | | | | | | | | |

STATEMENT 5.3**Fatal accidents and casualties in non-coal mines by broad cause in 2018**

| Cause/Mineral | Oil | Copper | Galena | Gold | Iron | Lime- Stone | Mang- anese | Stone | Others | TOTAL |
|--------------------|-----|--------|--------|------|------|----------------|----------------|-------|--------|-------|
| Fall of Roof | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 3 |
| Killed-S/Injured : | 0-0 | 0-0 | 2-1 | 0-0 | 0-0 | 0-0 | 1-0 | 0-0 | 0-0 | 3-1 |
| Fall of Sides | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 5 | 9 |
| Killed-S/Injured : | 0-0 | 0-0 | 1-0 | 0-0 | 0-0 | 0-0 | 0-0 | 4-0 | 8-1 | 13-1 |
| Dumpers | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 4 |
| Killed-S/Injured : | 0-0 | 1-1 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 2-1 | 1-0 | 4-2 |
| Trucks | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 2 | 5 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 2-0 | 0-0 | 1-0 | 2-0 | 5-0 |
| Other Machinery | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 2 | 3 | 8 |
| Killed-S/Injured : | 0-0 | 0-0 | 1-0 | 0-0 | 3-0 | 0-0 | 0-0 | 3-3 | 3-0 | 10-3 |
| Explosives | 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 |
| Fall of Persons | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 2 | 6 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 1-0 | 0-0 | 0-0 | 3-0 | 2-0 | 6-0 |
| Fall of Objects | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 4 |
| Killed-S/Injured : | 1-0 | 0-0 | 0-0 | 0-0 | 1-1 | 0-0 | 0-0 | 0-0 | 2-0 | 4-1 |
| Other causes | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 6 |
| Killed-S/Injured : | 1-2 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 5-2 | 6-4 |
| Belowground | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 1 | 5 |
| Killed-S/Injured : | 0-0 | 0-0 | 3-1 | 0-0 | 0-0 | 0-0 | 1-0 | 0-0 | 2-0 | 6-1 |

| | | | | | | | | | | |
|--------------------|-----|-----|-----|-----|-----|-----|-----|------|------|-------|
| Opencast | 0 | 1 | 0 | 0 | 3 | 2 | 0 | 11 | 18 | 35 |
| Killed-S/Injured : | 0-0 | 1-1 | 0-0 | 0-0 | 4-1 | 2-0 | 0-0 | 13-4 | 20-1 | 40-7 |
| Aboveground | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 5 |
| Killed-S/Injured : | 2-2 | 0-0 | 1-0 | 0-0 | 1-0 | 0-0 | 0-0 | 0-0 | 1-2 | 5-4 |
| ----- | | | | | | | | | | |
| TOTAL | 2 | 1 | 4 | 0 | 4 | 2 | 1 | 11 | 20 | 45 |
| Killed-S/Injured : | 2-2 | 1-1 | 4-1 | 0-0 | 5-1 | 2-0 | 1-0 | 13-4 | 23-3 | 51-12 |
| ----- | | | | | | | | | | |

STATEMENT 5.4

Serious accidents and seriously injured persons in non-coal mines by broad causes in 2018

| Cause/Mineral | Oil | Copper | Galena | Gold | Iron | Lime- Stone | Mang- anese | Stone | Others | TOTAL |
|--------------------------------|--------|--------|--------|--------|--------|----------------|----------------|--------|--------|----------|
| Fall of Roof S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Fall of Sides S/Injured : | 0 0 | 0 0 | 1 1 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 1 1 |
| Dumpers S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Trucks S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Other Machinery S/Injured : | 0 0 | 1 1 | 0 0 | 1 1 | 1 1 | 0 0 | 0 0 | 0 0 | 0 0 | 3 3 |
| Explosives S/Injured : | 0 0 | 0 0 | 1 1 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 1 1 |
| Fall of Persons S/Injured : | 1 1 | 1 1 | 1 1 | 0 0 | 2 2 | 0 0 | 0 0 | 0 0 | 2 2 | 7 7 |
| Fall of Objects S/Injured : | 0 0 | 0 0 | 1 1 | 2 2 | 0 0 | 0 0 | 0 0 | 0 0 | 1 1 | 4 4 |
| Other causes S/Injured : | 3 3 | 0 0 | 1 1 | 0 0 | 2 2 | 1 1 | 1 1 | 0 0 | 2 2 | 10 10 |
| Belowground S/Injured : | 0 0 | 1 1 | 2 2 | 1 1 | 0 0 | 0 0 | 1 1 | 0 0 | 1 1 | 6 6 |

| | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|----|
| Opencast | 1 | 1 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 7 |
| S/Injured : | 1 | 1 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 7 |
| Aboveground | 3 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 4 | 13 |
| S/Injured : | 3 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 4 | 13 |
| ----- | | | | | | | | | | |
| TOTAL | 4 | 2 | 5 | 3 | 5 | 1 | 1 | 0 | 5 | 26 |
| S/Injured : | 4 | 2 | 5 | 3 | 5 | 1 | 1 | 0 | 5 | 26 |
| ----- | | | | | | | | | | |

STATEMENT 5.5**Regionwise/zonewise accidents in non-coal mines in 2018**

| Region/Zone | Fatal Accidents | | | Serious Accidents | |
|--------------------|------------------|------------|-----------|-------------------|-----------|
| | No. of Accidents | Fatalities | S/Injured | No. of Accidents | S/Injured |
| Koderma | 4 | 5 | 0 | 0 | 0 |
| Central Zone | 4 | 5 | 0 | 0 | 0 |
| Guwahati | 2 | 2 | 2 | 1 | 1 |
| Sitarampur III | 1 | 1 | 0 | 0 | 0 |
| Eastern Zone | 3 | 3 | 2 | 1 | 1 |
| Ahmedabad | 0 | 0 | 0 | 1 | 1 |
| Udaipur | 9 | 9 | 1 | 5 | 5 |
| North-Western Zone | 9 | 9 | 1 | 6 | 6 |
| Ajmer | 6 | 7 | 2 | 2 | 2 |
| Ghaziabad | 2 | 2 | 0 | 0 | 0 |
| Varanasi | 1 | 1 | 1 | 0 | 0 |
| Northern Zone | 9 | 10 | 3 | 2 | 2 |
| Hyderabad I | 3 | 3 | 0 | 1 | 1 |
| Hyderabad II | 6 | 7 | 0 | 0 | 0 |
| South-Central Zone | 9 | 10 | 0 | 1 | 1 |
| Bhubaneswar | 0 | 0 | 0 | 3 | 3 |
| Chaibasa | 3 | 4 | 1 | 1 | 1 |
| South-Eastern Zone | 3 | 4 | 1 | 4 | 4 |
| Bangluru | 1 | 1 | 0 | 1 | 1 |
| Bellary | 3 | 5 | 4 | 3 | 3 |
| Southern Zone | 4 | 6 | 4 | 4 | 4 |
| Bilaspur | 1 | 1 | 0 | 5 | 5 |
| Jabalpur | 1 | 1 | 0 | 0 | 0 |
| Nagpur I | 2 | 2 | 1 | 3 | 3 |
| Western Zone | 4 | 4 | 1 | 8 | 8 |
| ALL INDIA | 45 | 51 | 12 | 26 | 26 |

STATEMENT 5.6**Fatal accidents in non-coal mines by cause and responsibility in 2018**

| Responsibility / Major Cause Group | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Total |
|------------------------------------|----|---|---|---|---|---|---|----|---|-------|
| Misadventure | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Management | 5 | 0 | 5 | 3 | 0 | 1 | 0 | 8 | 0 | 22 |
| Management & Sub. Sup. Staff(SSS) | 5 | 1 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 10 |
| Management, SSS & Deceased | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| Management, SSS & Others | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Management & Coworker | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Management & Deceased | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Management & Contractor's Worker | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 3 |
| Subordinate Supervisory Staff(SSS) | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| Sub.Sup.Staff, Coworker & Deceased | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Coworker | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 13 | 1 | 9 | 7 | 0 | 1 | 1 | 12 | 1 | 45 |

STATEMENT 5.7**Summary of Findings of Fatal Accidents in Non-Coal mines during the year 2018**

 Code : 0100 Ground Movement

 Code : 0111 Fall of Roof
 (3 Deaths)

1. Date - 06.06.18 Mine - BALARIA GALENA & SPHALERITE
 Time - 19.45 Owner - HINDUSTAN ZINC LTD.
 Dist. - Udaipur, State - Rajasthan
 Person(s) Killed :
 1. Babu Lal Meena, Driller, Male, 37 Years

While a drilling crew of two persons were adjusting the angle of the feed boom of drill machine under inadequately supported roof in a drive of a belowground metalliferous mine, suddenly a part of roof measuring about 2.1m x 1.2m x 0.4m, slipped from a height of about 4.0m along a hidden place and fell on them, inflicting serious bodily injuries to one person, while the other person succumbed to his injuries instantly.

Had,

i) the roof of working place been made and kept secure as required under the provision of Regulation 112(1) of the Metalliferous Mines Regulations, 1961 and the provisions of the Systematic Timbering Rules been effectively compiled and the width and height of drive been kept at 3.6m and 3m respectively as required under the provisions of Regulation 112(2)(c) read with point no. 3.0 of code of Timbering Rules framed as per condition no. 2.0 of permission letter no. UR/2412 dated 18.04.2018 under Regulation 107(3) of the Metalliferous Mines Regulations, 1961;

this accident could have been averted.

2. Date - 25.08.18 Mine - KANDRI MANGANESE MINE
 Time - 13.05 Owner - MANGANESE ORE [INDIA] LTD.
 Dist. - Nagpur, State - Maharashtra
 Person(s) Killed :
 1. O.R. Raut, Support Personal, Male, 39

Years

While erecting a chock support to the roof by dislodging an already erected temporary prop, a piece of ore measuring about 30cm length, 20 cm width and 12 cm thick parted from the roof and fell from a height of 2.75 m and hit the helmet of a person standing below the stope ore roof, inflicting serious injury which turned fatal after three months and three days during the course of treatment in a hospital.

had,

i) the temporary support not been disturbed while erecting chock support,

ii) the working place been carefully examined and

iii) it been ensured that the provisions of the Act, regulations and orders made thereunder are strictly enforced to ensure safety of persons employed therein,

this accident could have been averted.

3. Date - 30.08.18
Time - 2.45

Mine - MOCHIA LEAD AND ZINK MINE
Owner - HINDUSTAN ZINC LTD.
Dist. - Udaipur, State - Rajasthan
Person(s) Killed :
1. P.C. Meena, Driller, Male, 37 Years

While a driller was dressing the roof and sides standing on an elevated bucket of LHD under inadequately supported roof near the brow of a stope of a belowground metalliferous mine suddenly a part of roof measuring about 1.4m (L) x 0.8m (W) x 0.4m (T)1, slipped from a height of about 4.3m along a hidden plane and fell on him, inflicting serious bodily injuries to which he succumbed instantly.

Had,

i) the roof of working place been made and kept secure as required under the provision of Regulation 112(1) of the Metalliferous Mines Regulations, 1961 and the provisions of the Systematic Timbering Rules been effectively complied and the width and height of drive been kept at 4.2m and 3.8m respectively as required under the provisions of Regulation 112(2)(c) read with point no. 1.1 of technical note and point no. F(c) of code of Timbering Rules framed as per condition no. 2.0 of permission letter no. UR/2448 dated 18.04.2018 under Regulation 107(3) of the Metalliferous Mines Regulations, 1961; and

ii) the manual dressing work standing on an unstable platform (in the elevated bucket of LHD) not been allowed, as required under condition no. 5.4 of stoping permission granted vide this Directorate's letter no. UR/2448 dated 18.04.2018 under Regulation 107(3) of the Metalliferous Mines Regulations, 1961;

this accident could have been averted.

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

4. Date - 08.01.18
Time - 11.00

Mine - REWAT DUNGRI RANGE MARBLE MINE(L.N.23)
Owner - SHRI HAZI MUKITYAR
Dist. - Nagaur, State - Rajasthan
Person(s) Killed :
1. A. Bawri, Worker, Male, 35 Years
2. B. Bawri, Worker, Male, 35 Years

While two persons were engaged in a 46m deep and almost vertical marble opencast mine to collect diesel container being lowered through crane from hangwall side, a mass of rock from hangwall measuring 6m (L) x 2m (H) x 1.5m (T) suddenly fell down through a height of about 36m (120ft), burying them underneath its debris resulting instant death on the spot.

Had,

(i) the mine not been operated in contravention of Prohibitory Order under Section 22(3) of the Mines Act, 1952 issued vide this Directorate's letter No. AJ/DMS/22(3)/Nagaur/2003/2004, dated 19.09.2003 as required under Section 18(4) of the Mines Act, 1952,

(ii) the sides of opencast workings been benched or kept sloped at an angle of safety not exceeding 60 degrees from horizontal, or kept secured and free of undercuts and overhangs to prevent danger from fall of sides, as required by the provisions of Regulation 106(2) & (3) & (5) of the Metalliferous Mines Regulations, 1961,

(iii) the mine been placed under the charge of a manager holding prescribed qualifications as to ensure that all work in the mine was carried on in accordance with the provisions of the Mines Act, and of the regulations, rules, bye-laws and

orders made there-under, whereby safety of the mine as well as life and safety of persons employed in the mine could be ensured in every respect, as required by the provisions of Section 17(1) of the Mines Act, 1952, read with Regulation 34(1) of the Metalliferous Mines Regulations, 1961, and

(iv) a mining mate been appointed to personally supervise operations connected with the mine and ensure proper observance of the provisions of the Mines Act, 1952, and of the rules and regulations framed there-under, whereby safety of the mine as well as life and safety of persons employed in the mine could be ensured in every respect, as required to be appointed under Regulation 116 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

5. Date - 20.02.18 Mine - KALWAN MASONRY STONE MINE (ML 259/03)
 Time - 11.00 Owner - GHUSINGA REAL ESTATE DEVELOPER PVT. LTD.
 Dist. - Dausa, State - Rajasthan
 Person(s) Killed :

1. Vikram Meena, Helper, Male, 23 Years

While an excavator was loading a dumper by making undercut at the toe of about 15m high sidewall having cracks and hidden slip in an opencast masonry stone mine, a part of the high-wall measuring about 10 meters (length) x 15 meters (height) x 2 meters (thick) slid along the slip plane from the side through a height of 2m only damaging and burying the excavator and dumper partially in which the excavator Operator was somehow trapped and buried underneath its debris and died almost instantaneously on the spot.

Had,

i) the sides of opencast workings been benched or kept sloped at an angle of safety not exceeding 60 degrees from horizontal, or kept secured and free of undercuts to prevent danger from fall of sides, as required by the provisions of Regulation 106(2) & (3) & (5) of the Metalliferous Mines Regulations, 1961,

ii) the mine workings been examined to ascertain the state of the sides and not been allowed to operate unauthorisedly as required by the provisions of Regulations 116(3) and Regulation 42(a), & 47 of the MMR, 1961,

iii) the formation of benches of prescribed height as per approved rectification scheme, been made under the personal supervision of person appointed as per Section 17(1) of the Mines Act, 1952, read with Regulation 34(1) of the Metalliferous Mines Regulations, 1961,

this accident would have been averted.

6. Date - 01.04.18 Mine - RAJPURA DARIBA GALENA & SPHAL
 Time - 21.45 Owner - HINDUSTAN ZINC LTD.
 Dist. - Rajsamand, State - Rajasthan
 Person(s) Killed :

1. Roshan Lal Regar, Blaster, Male, 51 Years

While a person was preparing for secondary blasting in a boulder at the bottom of broken muck pile near the bow in a stope of underground Metal mine, suddenly a hidden boulder measuring about 1.0(L)mx0.8(B)mx1m(W) along with muck rolled down from brow from a height of about 3.0m over his body which buried him causing serious injuries to which he succumbed.

Had,

i) the Standard Operating Procedure for secondary blasting framed by Manager been strictly implemented, where there were chances of falling down hidden boulders, thus not endangering life and safety of person employed therein, as required under

the provisions of regulation 181 of the Metalliferous Mines Regulations, 1961 read with Standard Operating Procedure.

This accident could have been averted.

7. Date - 07.04.18 Mine - RAULI KALYANPUR MINE (2434)
 Time - 11.00 Owner - ANIL KUMAR DWIVEDI
 Dist. - Varanasi, State - Uttar Pradesh
 Person(s) Killed :
 1. Tulshi Das, Labour, Male, 40 Years

While workmen were engaged in loading stone on a truck near the high-wall of a stone quarry, loose boulders from the high-wall fell down from a height of 11.84m on them, inflicting serious bodily injuries to one of them to which he succumbed whilst undergoing treatment at the hospital.

Had,

i) the sides of opencast workings been benched and kept sloped and secured, and kept dressed off all loose stones/boulders, as to prevent fall of sides as required by the provisions of Regulation 106 of the Metalliferous Mines Regulations, 1961,

ii) the mine, in absence of the manager, been placed under the charge of a duly qualified person authorized to act as manager, to ensure that all work in the mine was carried on in accordance with the provisions of the Mines Act, and of the regulations, rules, bye-laws and orders made there-under, whereby safety of persons employed in the mine was ensured in every respect, or working of the mine been kept suspended till the return of the Manager from his leave, as required by the provisions of Regulation 34(7) (a) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

8. Date - 29.04.18 Mine - T.VENKATESWARA SLATE MINE
 Time - 11.30 Owner - SMT THIPPI REDDY SAILAJA
 Dist. - Prakasham, State - Andhra Pradesh
 Person(s) Killed :
 1. B. Seetamma, Outsider, Female, 30 Years
 2. Mangamma, Outsider, Female, 30 Years

While 3 persons were collecting slate pieces at the toe of a bench in an opencast mine, Fractured layers of slate measuring 12m x 10m x 4m dislodged from the side at a height of 12m and suddenly fell over two of them causing grievous injuries to which they succumbed almost instantly.

Had,

i) the persons unauthorizedly not entered into the mine workings without permission of the manager as required under Sec 48(6) of the Mines Act 1952 read with Regulation 181 and Regulation 59(3) of the Metalliferous Mines Regulation 1961

ii) the Gates, fences were provided and maintained at the mine or other suitable arrangement including the posting of security guards, were made to prevent any unauthorized entry into the mine as required under Reg. 115, Reg. 59(3) of Metalliferous Mines Regulation 1961 read with Permission granted under Reg. 106(2) (b) of Metalliferous Mines Regulation 1961 vide letter No: HR2/SCZ/106(2) (b)/212/(17)/2017/4193 Dated: 18.09.2017,

this accident could have been averted.

9. Date - 27.06.18 Mine - BAGJATA MINES
 Time - 12.30 Owner - URANIUM CORPN. OF INDIA LTD.
 Dist. - East Singhbhum, State - Jharkhand

Person(s) Killed :

1. Ganesh Hembram, Face Worker, Male, 35 Years
2. Matu Hansda, Face Worker, Male, 48 Years

While three persons were standing on the scissor lift platform to commence the operation of grouting of rock bolts in an ore drive of an underground mine, a mass of rock measuring about 3.5m x 2.4m x 0.5m fell from hangwall side from a height of about 1.5m on the scissor lift platform, trapping two persons, inflicting serious bodily injuries to two of them which turned fatal instantly and the third escaped with minor injuries.

Had,

the roof and hangwall side of the working place been made and kept secure, as required under Regulation 112 (1) of the Metalliferous Mines Regulations, 1961, read with approved Systematic Support Rules under Regulation 112(2)(a) of the Metalliferous Mines Regulations, 1961, vide this Directorate's letter No. BUM/1700, dated 23.06.2010,

this accident could have been averted.

10. Date - 16.11.18
Time - 10.30

Mine - MARAM VENKA REDDY GRANITE MINE
Owner - M/S MARAM VENKA REDDY GRANITES
Dist. - Prakasham, State - Andhra Pradesh
Person(s) Killed :
1. D. Shivkoti, Outsider, Male, 27 Years

While a non-employee was defecating at the toe of the Overburden bench of an opencast mine, Mass of Overburden measuring 3m x 1m x 6m was suddenly fell over him from the side of the bench causing grievous injuries and died while being taken to hospital.

Had,

i) the danger places been fenced by the shift Foreman as required under Reg 46(7) of the Metalliferous Mines Regulation 1961 thus prevented the entry of the persons near the dangerous place.

ii) the dangerous place been inspected and rectified or otherwise reported to the superior by the mining Mate as required under Regulation 47(2) & (5)(a) of the Metalliferous Mines Regulation 1961

iii) the persons inadvertently not entered into the mine as required under Sec 48(6) of the Mines Act 1952 r.w. Regulation 181 and Reg. 59(3) of the Metalliferous Mines Regulation 1961,

iv) Gates, fences were provided and maintained at the mine or other suitable arrangement including the posting of security guards, were made to prevent any unauthorized entry into the mine as required under Reg. 115, Reg. 59(3) of Metalliferous Mines Regulation 1961 r.w. Permission letter No: HR-2/SCZ/106(2)(b)/91(18)/2018/639 dated 22.01.2018, granted under Reg. 106(2)(b) of Metalliferous Mines Regulation 1961,

v) the side of the bench was not under cut to cause overhang as required under Reg 106(5) of Metalliferous Mines Regulation 1961,

this accident could have been averted.

11. Date - 26.12.18
Time - 18.00

Mine - DOMCHANCH STONE MINE
Owner - M/S UMASHANKAR PRASAD
Dist. - Koderma, State - Jharkhand
Person(s) Killed :
1. Manu Mehta, Work-person, Male, 26 Years

2. Viyay Mehta, Work-person, Male, 99 Years

While a group of persons were working at the toe of about 28-32m high bench in an opencast stone mine, a mass of stone measuring about 6m x 3m x 5m thick fell down from a height of 22 to 25m inflicting fatal injuries to two persons.

Had,

i) the sides in the mine been kept adequately benched, sloped or secured so as to prevent danger from fall of sides as required under Regulation 106(3) of the Metalliferous Mines Regulation, 1961;

ii) a duly qualified person been authorized in writing to act as manager in the absence of the mine manager to perform his duties as required under Regulation 34(7)(a) of the Metalliferous Mines Regulations, 1961; and

iii) the workings in the mine been placed under charge of a mining mate or other competent person as required under Regulation, 116(1) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

Code : 0113 Fall of Overhangs
(1 Death)

12. Date - 22.06.18
Time - 7.00

Mine - JAMDIHA STONE MINE
Owner - BHIM SAHU
Dist. - Koderma, State - Jharkhand
Person(s) Killed :
1. Pawan Das, Helper, Male, 24 Years

While five persons were charging shot holes, at bottom of the quarry adjacent to 35-40m high side wall in an opencast stone mine, a stone piece measuring approximately 0.5m x 0.5m x .02m thick fell down from a height of 13 to 15m inflicting fatal injuries to one person and minor head injuries to other one person.

Had,

i) the workers were not been deployed at the bottom of the quarry for extraction of mineral as required by Order under Section 22(3) of the Mines Act, 1952 issued vide this Directorate's letter No. KR/1677, dated 27.12.2011,

ii) Qualified Manager and a Mining Mate been appointed to supervise the mining operations as required under Regulations 39(1)(a), 116(1) & 34(1) of the Metalliferous Mines Regulations, 1961 read with Section 17(1) & 18(1) of the Mines Act, 1952,

iii) the sides of the mine been kept adequately benched as required under Regulation 106(2)(b) of the Metalliferous Mines Regulation, 1961, read with DGMS Cir. No. 36/1972 & Tech. 17/1977.

this accident could have been averted.

Code : 0116 Premature Collapse of Workings/Pillars
(1 Death)

13. Date - 17.05.18
Time - .45

Mine - DUCHKI SERPENTINE MINE ML-25/95
Owner - M/S OMEGA MARMO STONE PVT. LTD.
Dist. - Dungarpur, State - Rajasthan

Person(s) Killed :

1. Ratan Ram, Helper, Male, 40 Years

While a person standing on top of a marble bench was adjusting the water nozzle for cutting of marble block by wire saw machine in an opencast metalliferous mine, a part of the block from the bench collapsed prematurely along the hidden slip plane, fell down along with it, thereafter another part measuring about 3.5m x 3.0m x 1.5m of same block, slipped and fell on him from a height of about 6m, to which he succumbed.

Had,

i) the person been allowed to work in the marble bench during wire saw cutting from a safer place and the safe code of practice of wire saw cutting been followed thus negligently not endangering the safety of persons employed therein as required under Regulation 181 of the Metalliferous Mines Regulations, 1961,

ii) adequate general lighting arrangement been provided in the working place of opencast workings during working hours as required under Regulation 146(1)(a) of the Metalliferous Mines Regulations, 1961, read with Section 17 of the Mnes Act, 1952 and

iii) the working been properly inspected for any cracks etc. before deploying person and special precautions necessary, if any, for the safety of person been taken as required under Regulation 47(2)(b), read with Regulation 116(3)(b) of the Metalliferous Mines Regulations, 1961.

this accident could have been averted.

Code : 0200 Transportation Machinery(Winding)

Code : 0221 Overwinding of Cages/Skip etc. (upgoing)
(1 Death)

14. Date - 06.05.18
Time - 17.05

Mine - BORJA TIBU IRON ORE MINE
Owner - M/S GODAVARI POWER & ISPAT LTD.
Dist. - Rajnandgaon, State - Chhattisgarh
Person(s) Killed :
1. Govind Kumar, S. Guard, Male, 31 Years

While a loaded truck was being reversed near an ore handling plant to take left turn in forward direction for proceeding towards weighbridge for weighment at an iron ore mine, the driver lost control over the truck after it moved from level ground to a slope of about 1 in 15 causing the truck rolling back in uncontrolled manner to smash a security shed located about 113 meter away and topple beside the shed, in which a security guard inside the shed was run over by the truck and succumbed on the spot, while the truck driver escaped unhurt.

Had,

(i) the loaded truck been reversed towards the berm on level ground provided at the ore handling plant and not negligently towards slope of the ground, as required under Regulations 41(1)a) read with Regulation 181 of the Metalliferous Mines Regulations, 1961; and

(ii) proper supervision was made during reversal of the loaded truck at the ore handling plant as required under Regulations 43 and Regulation 106(2)(b) read with Para No. 16.9 of the Permission granted vide this Office letter No. BSP/Reg. 106(2)/38/15/4840 Bilaspur dated 14.10.15 under the Metalliferous Mines Regulations, 1961,

(iii) the safe operating procedure for movement of truck was framed and implemented effectively at the loading point in such a manner that the empty truck was positioned in forward direction for loading the ore so that the loaded truck was not reversed on gradient for going out in forward direction, as required under Section 18(4) of the Mines Act, 1952 and Regulation 106(2)(b) read with Para No. 16.9 of the Permission granted vide this Office letter No. BSP/Reg. 106(2)/38/15/4840 Bilaspur dated 14.10.15 under the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

Code : 0300 Transportation Machinery (Non-Winding)

Code : 0335 Dumpers
 (4 Deaths)

15. Date - 22.01.18 Mine - JANALAKUNTE ROUGH STONE MINE II
Time - 20.45 Owner - PYRAMID GRANITE SH bHAWARLAL V. BOHRA
Dist. - Chikballapur, State - Karnataka
Person(s) Killed :
1. D.K. Mahto, Helper, Male, 24 Years

While a driver started his tipper during the dark hours in a stone quarry, after replacing the flattened wheel, collided head-on with another tipper parked on the same haul road in opposite direction, pushing it along with its driver and helper on to the lower bench from a height of about 10m resulting serious bodily injuries to both of them, to which the helper succumbed to his injuries.

Had,

i) a duly qualified manager and other subordinate supervisory officials been appointed in the mine to ensure that all the work in the mine was done as per the provisions of the Act and of the Regulations, Rules, Bye-laws and Orders made thereunder as required under Regulation 34(1);

ii) the repair work was carried out in daylight hours or by providing adequate lighting as required under Regulation 146(1);

iii) SOP for repair to machinery and the code of traffic rules were prepared and implemented as required under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961 read with permission conditions no. 412, 8.1 and 9.3 of permission letter no. SZ/BGR/106(2)(b)/P-50/1617/1306 dated 07.09.2016 and

iv) the tipper driver drove his tipper safely, thus not negligently or willfully endangering the life and limb of another driver and helper as required under Regulation 181 of the Metalliferous Mines Regulations, 1961

this accident could have been averted.

16. Date - 02.04.18 Mine - MALANJKHAND COPPER MINE
Time - 17.10 Owner - HINDUSTAN COPPER LTD.
Dist. - Balaghat, State - Madhya Pradesh
Person(s) Killed :
1. Dulichand Gautam, Tipper Helper, Male, 27
Years

While a tipper was plying on a downhill gradient of haul-road in an open cast mine, its braking system failed, resulting into its uncontrolled movement that ended with an accidental hitting to side wall, thereby inflicting serious bodily injuries to

its operator and helper, to which helper succumbed after seven hours and driver recovered after fifteen days treatment in the hospital.

Had,

the tipper been examined thoroughly before putting into use by the competent person, thereby negligently not omitting to maintain the equipment in safe working order, by contravening the provisions of Regulation 176(5) & 53(b) of Metalliferous Mines Regulations; 1961,

the propeller shaft guard been provided and maintained in the tipper, thereby negligently not omitting to maintain the equipment in safe working order, by contravening the provisions of Regulation 172 of Metalliferous Mines Regulations; 1961,

the parking brake & seat belt been maintained in safe working order, thereby negligently not omitting to maintain the equipment in safe working order, by contravening the provisions of Regulation 172 of Metalliferous Mines Regulations; 1961,

the competent person with requisite driving license to perform the duty as tipper driver been appointed, thereby negligently not omitting to ensure safety of persons employed therein, by contravening the provisions of Regulation 39(2) of Metalliferous Mines Regulations, 1961 and

the safety and proper discipline of the persons employed in the mine been ensured, thereby negligently not omitting to ensure safety of persons employed therein, by contravening the provisions of Regulation 40 of Metalliferous Mines Regulations, 1961.

this accident could have been averted.

| | |
|---------------------|--|
| 17. Date - 16.05.18 | Mine - BHUNGAPAT SOAPSTONE MINE |
| Time - 2.30 | Owner - M/S A.S.D COMPANY PVT. LTD. |
| | Dist. - Pratapgarh, State - Rajasthan |
| | Person(s) Killed : |
| | 1. Kaluram, Dumper Optr., Male, 43 Years |

While a person was reversing a dumper for loading of blasted rock at overburden bench of an opencast Metalliferous Mine, the rear wheel of the dumper reached at the edge of the bench, rolled down uncontrolled to the bottom of quarry floor at the about 38 to 40m below, throwing the operator out of cabin in midway, inflicting serious injuries to which he succumbed soon after.

Had,

i) a strong parapet wall or embankment of height not less than 0.75m of the diameter of the wheel of the largest dumper used been provided at bench edge of the opencast working to prevent any out of control vehicle from getting off the road and falling to the bottom as required under Condition No. 26.0(4) of the permission letter No. 4255 dated 03.09.2007 granted under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961 and

ii) adequate general lighting arrangement been provided in the working place of opencast working where natural light is insufficient as required under Regulation 146(1)(a), 148(2) of the Metalliferous Mines Regulations, 1961, read with Condition No. 23.0(1) of the permission letter No. 4255 dated 03.09.2007 granted under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961

this accident could have been averted.

| | |
|---------------------|-----------------------------------|
| 18. Date - 11.06.18 | Mine - STONE QUARRY |
| Time - 15.00 | Owner - SHRI T.M. JOY |
| | Dist. - Ernakulam, State - Kerala |

Person(s) Killed :

1. Aliyas K.J., Tipper Driver, Male, 45

Years

While a tipper driver was driving a tipper on an uphill haul road having 1 in 8 gradient, he lost control over the tipper which fell down to lower haul road at a depth of 8m after crossing over the berm of 0.5m height thereby receiving fatal injuries.

Had,

a duly qualified Engineer or other competent person been appointed to hold general charge of the machinery and to take responsibility for its installation, maintenance and safe working as required under the provisions of Regulation 36(1), and

it was ensured that every tipper plying in the mine was mechanically sound and was in efficient working order as required under the provisions of Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961 read with Clause no. 4.1 of the governing conditions of the permissions letter No. 1232 dated 17.08.2016,

this accident could have been averted.

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

19. Date - 10.01.18
Time - 12.30

Mine - KHO PALPUR MARBLE MINE ML 64/97
Owner - KHANIJ UDYOG
Dist. - Alwar, State - Rajasthan
Person(s) Killed :

1. Ramkhilari Meena, Truck Optr., Male, 50

Years

While a truck driver was peeping out of his cabin during reverse movement of the truck, he fell off from his seat on the ground, got hurt by a road side boulder and sustained internal injuries in the groin area and left leg to which he succumbed during treatment in hospital.

Had,

the truck been provided with seat belt, rear view mirror, door lock and other safety features and code of traffic rules for the transportation trucks been framed & enforced in mine area as required by the permission order issued under Regulation 106(2)(b) of Metalliferous Mines Regulation 1961 vide letter no. 3732 dated 27.09.2013 and an engineer been appointed in the mine to ensure safe working of vehicles in the mine as required under Regulation 36 of the Metalliferous Mines Regulation, 1961;

this accident could have been averted.

20. Date - 03.02.18
Time - 15.00

Mine - EKTARWA STONE MINE (NO. 54/P)
Owner - M/S SANGAM STONE MINERALS
Dist. - Koderma, State - Jharkhand
Person(s) Killed :

1. Manoj Kumar Mehta, Tipper Driver, Male,

26 Years

While a stone loaded tipper was driven from bed of the quarry to surface on a haul road having gradient of about 1 in 5, it suddenly rolled back and became off the road and fell down to a depth of about 25m in waterlogged area of the quarry, causing fatal injuries to the driver.

Had,

i) the gradient of haul road been maintained at 1 in 16, adequate parapet wall/berm provided along the edge of haul road and qualified mine manager been appointed for supervision, management, direction and control to prevent such dangerous conditions to exists in the mine as required by the order issued under section 22(3) of the Mines Act, 1952 vide this Directorate's letter KR/3832, dated 05.12.2016; and

ii) width of the haul road been maintained at three time plus 5m of largest vehicle plying on it as required by DG's Tech. Cir. No. 09/2008 read with Regulation 106(2)(b) of Metalliferous Mines Regulations, 1961; and

iii) the competent person been appointed as tipper driver for safe running of the tipper as required by the Regulation 39(1)(a)(iii) of the Metalliferous Mines Regulations, 1961;

21. Date - 17.06.18
Time - 13.00

Mine - BIRMITRAPUR LIMESTONE & DOLOMITE MINE
Owner - BISRA STONE LIME CO. LTD.
Dist. - Sundergarh, State - Orissa
Person(s) Killed :

1. Addition Jojo, Tanker Opnr, Male, 49

Years

While a water tanker was plying on the haul road of gradient 1 in 17.36 to fill water from water logged quarry of an opencast mine, the operator could not keep it under control, it toppled and fell in the water logged quarry from a height of about 3.85m, partly submerging the water tanker from the operator's side, resulting into death of the operator due to asphyxia due to drowning.

Had,

i) the haul road in the quarry been provided with strong berm of not less than one meter in height to prevent water tanker form getting off the road and falling to lower bench, as required under Condition No. 4.5 of the Annexure attached with the permission under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961, vide this Directorate's letter No. CR/4259, dated 06.09.02,

ii) the entrance to the quarry, not in operation, from the mine been provided with barrier or gate so designed and constructed as to prevent any person from inadvertently entering in it, as required under Regulation 115(4) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

22. Date - 28.10.18
Time - 1.30

Mine - JHAMARKOTRA ROCK PHOSPHATE
Owner - RAJASTHAN STATE MINES & MINERALS LTD.
Dist. - Udaipur, State - Rajasthan
Person(s) Killed :

1. Munnu Verma, Tipper Opnr., Male, 21 Years

While an operator was reversing tipper, loaded with blasted rock, towards the edge on the top bench of the overburden dump of an opencast metalliferous mine for unloading, it started sliding uncontrolled along the slope of the bench, rolled down with the operator to a vertical depth of about 43m, inflicting serious bodily injuries to which he succumbed soon after and remained entrapped in the mangled cabin for about 6 hours before being rescued.

Had,

the tipper not been allowed to approach the edge of the bench for unloading without providing strong parapet wall or sufficient embankment(berm) to prevent any out of control vehicle from getting off the road and falling to the bottom as required under condition no. 27(4) of the permission letter No. UR/3676 dated 31.07.2007 granted under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961

this accident could have been averted.

23. Date - 17.12.18 Mine - MAIHAR LIMESTONE MINE
 Time - 10.35 Owner - CENTURY TEXTILES AND INDUSTRIES LTD.
 Dist. - Satna, State - Madhya Pradesh
 Person(s) Killed :
 1. Md. Shamsher, Dumper Optr., Male, 47 Years

While a diesel tanker was being reversed speedily on an approach road from rest shelter to parking area of a limestone opencast mine, a dumper operator, who was going toward his dumper placed in parking area was hit and run over by the rear side right wheel of the tanker, inflicting serious injuries to him which he succumbed instantaneously.

Had,

i) the diesel tanker not been reversed speedily without ensuring that he had a clear view of the area behind the vehicle or he has the assistance of a "spotter or pitman" duly authorised in writing by the manager as required under permission condition 13.1(e) of the permission letter No. 2843 dated 15.05.1979 granted under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961, and

ii) the safe operating procedure and the traffic rules been followed as required under permission condition 11.2(c) and 11.3 of the permission letter No. 2843 dated 15.05.1979 granted under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

 Code : 0400 Machinery Other than Transp. Machinery

 Code : 0442 Cutting Machines
 (1 Death)

24. Date - 25.07.18 Mine - PALAMPUR MARBLE MINE ML 55/97
 Time - 11.15 Owner - MARBLE MINING COMPANY
 Dist. - Alwar, State - Rajasthan
 Person(s) Killed :
 1. Ramkishan, Helper, Male, 31 Years

While marble block was being cut using the wire saw machine, suddenly wire rope broke & loosened diamond beads flew off to hit the drill machine helper working at a distance of about 11m diagonally away from the machine helper working at a distance of about 11m diagonally away from the machine to receive serious injuries to which he later succumbed.

Had,

i) proper supervision been carried out to ensure that danger areas in front of the marble block to be sawn have been checked and cordoned off and no persons been present in the danger area, as called vide clause 15.1.3. & 11.1(d) of Directorate's letter No. S29024/GR/RJ/Alwar/Per/1239 dated 27/4/2018, granting relaxations from the provisions of Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961; and

ii) appropriateness of the guard provided on the wire saw machine been ensured so as to effectively prevent flying parts/diamond beads, as required under the provisions of Regulation 174 of the Metalliferous Mines Regulations, 1961.

this accident could have been averted.

 Code : 0443 Loading Machines
 (2 Deaths)

25. Date - 10.04.18 Mine - K.S.R. STONE QUARRY
 Time - 14.00 Owner - SHRI K. SATYANARAYANA RAO
 Dist. - Peddapalli, State - Telangana
 Person(s) Killed :
 1. Indra Dev Yadav, Helper, Male, 21 Years

While an helper(untrained) of an excavator was operating the excavator of a stone quarry and was trying to drag a boulder of size about 2.8m (in length) x 1.8m (in width) 0.1m (in height) by an excavator bucket(Cap. 1 cub m), excavator tilted and while he was trying to escape,Excavator toppled over him and the head of the body was cut at the neck an completely separated of the body, inflicting death on spot.

Had,

i) a duly qualified Manager was appointed to have overall management, control, supervision and direction of the mine as required under Section 17 of the Mines act, 1952 read with the Regulation 34(1) of the Metalliferous Mines Regulations, 1961 and

ii) statutory supervisors like Mine Foreman and Mine mate were appointed in the mine to supervise the working as required under the provisions of the Regulations 37 and 116 of the Metalliferous Mines Regulations, 1961.

iii) work person was vocationally trained as required under the Rule 6 to 9 of the Mines Vocational Training Rules, 1966,

this accident could have been averted.

26. Date - 03.08.18 Mine - PEDDAPURAM GRANITE MINE
 Time - 16.40 Owner - GAYATRI GRANITES
 Dist. - Warangal Rural, State - Telangana
 Person(s) Killed :
 1. P.N. Mohan, Fitter, Male, 62 Years

While a group of four persons were being hoisted by bucket attached to hoist rope of a derrick crane from sump to surface in a granite quarry, the hoist rope was broken and the bucket fell down from a height of about 3.3m due to which one of the person got injured and succumbed to injuries while undergoing treatment at hospital after 8 hours.

Had,

i) no man hoisting been done through derrick crane as required under Regulation 42(c) and Regulation 181 of the Metalliferous Mines Regulations, 1961 and

ii) Safe Operating Procedures formulated by the mine manager been ensured and implemented by personal supervision of safe operation of derrick crane as required under Regulation 44(1) (a) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

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

| | |
|-------------------------------------|---|
| 27. Date - 06.02.18 Time - 16.00 | Mine - EAST CAST MINERALS BALL CLAY MINE Owner - SHRI SVB PRASAD Dist. - West Godavari, State - Andhra Pradesh Person(s) Killed : 1. T.V.V. Rao, Helper, Male, 60 Years |
|-------------------------------------|---|

While a worker entered within the swing area of the bucket of a hydraulic excavator working at the bottom of an opencast ball clay mine to extract ore, he was hit by the bucket and received serious injuries to which he succumbed almost instantaneously.

Had,

i) the manager not allowed the workman without a helmet into the mine working, as required under Regulation 182A(1) read with Regulation 44(9) and

ii) the workman not negligently entered within the swin area of the working shovel to endanger his own life, thus contravening Regulation 181 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

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

| | |
|-------------------------------------|---|
| 28. Date - 29.03.18 Time - 17.30 | Mine - KARADIKOLLA(45) IRON ORE MINE Owner - GOGGA GURUSANTHIAH & BROS. Dist. - Bellary, State - Karnataka Person(s) Killed : 1. B. Nagaraju, Operator, Male, 17 Years 2. Battula Hari, Helper, Male, 16 Years |
|-------------------------------------|---|

While an operator along with helper engaged in dozing operation with JCB loader near top edge of bench in an opencast mine of yellow ocher clay, suddenly mass of clay parted from edge of bench resulted into falling of JCB loader from a height of 9m on the floor of same bench, causing serious bodily injuries to both of them to which one succumbed short while later and one died while being taken to hospital.

Had,

i) conditions specifying to work the mine with help of heavy machineries for digging, excavation and removal been obtained and necessary precautions such as a strong parapet wall or embankment or berm not less than one meter in height been provided to prevent the JCB loader getting off and falling to lower level been taken,

ii) the opencast workings been adequately benched, sloped and secured so as to prevent danger from fall of sides,

iii) the undercutting of side of bench not permitted so as to cause overhang,

iv) a duly qualified manager and other subordinate supervisory official been appointed in the mine to ensure that all work in the mine was done in accordance with the provisions of the Act and of the regulations, rules, bye laws and orders made thereunder and

v) the persons below eighteen years of age not allowed to work in mine, as required under the provisions of Regulation 106(2)(b), Regulation 106(1)(a), Regulation 106(3), Regulation 106(5) of the Metalliferous Mines Regulation, 1961, Section 40 and Section 17(1) of the Mines Act, 1952 read with Regulation 34(1), Regulation 39(1) and Regulation 116(1), of the Metalliferous Mines Regulation, 1961

this accident could have been averted.

29. Date - 20.07.18 Mine - PALUKUDODDI ROAD METAL & BUILDING STONE
 Time - 8.05 Owner - A. RAMAKRISHNUNUDU
 Dist. - Kurnool, State - Andhra Pradesh
 Person(s) Killed :
 1. P.C. Sekhar, Driller, Male, 62 Years
 2. M.M. Vali, Driver, Male, 31 Years

While a tractor mounted compressor was being reversed along the edge of a top bench in a Road Metal Quarry, the tractor driver lost control over its operation and fell down along with the tractor through a height of 13m inflicting serious bodily injuries to three persons who were engaged in drilling operation at a lower bench, in which the tractor driver and a driller died on the spot at two different places and rest survived.

Had,

i) the opencast workings been kept adequately benched, slopped and secure, conditions specifying to work the mine with the help of heavy machineries for digging, excavation and removal been obtained and necessary precautions such as a strong parapet wall or embankment or berm not less than one meter in height been provided to prevent the tractor mounted compressor getting off and falling to lower level,

ii) a duly qualified manager and other subordinate supervisory officials been appointed in the mine to ensure that all work in the mine was done in accordance with the provisions of the Act and of the regulations, rules, bye laws and orders framed thereunder and as required under the provisions of Regulation 106(2)(a) and (b) of the Metalliferous Mines Regulation, 1961, Regulation 34(1), Regulation 116(1) and Regulation 39(1) of the Metalliferous Mines Regulation, 1961 read with Section 17(1) of the Mines Act, 1952,

this accident could have been averted.

30. Date - 29.11.18 Mine - MOCHIA LEAD AND ZINC MINE
 Time - 18.00 Owner - HINDUSTAN ZINC LTD.
 Dist. - Udaipur, State - Rajasthan
 Person(s) Killed :
 1. S.P. Bharti, Engineer, Male, 22 Years

While a operator drove LPDT (Low Profile Dump Truck) for loading of support material, the moving LPDT collided along the side of a person who was standing and talking with a driver of Pick Van on the running bay of HEMM near the load scanner on the surface Portal (entry) of an underground metalliferous mine, the person fell down receiving serious bodily injuries to which he succumbed.

Had,

i) The person not been standing and talking to driver of pick van on the running bay of HEMM near the load scanner where movement of LPDT usually takes place thus not negligently endangering his own life and safety as required under the provisions of Regulation 181 & Regulation 41(1)(a) of the Metalliferous Mines Regulations, 1961, read with SOP (Standard Operating Procedure) framed for movement of LPDT and

ii) The LPDT not been driven by the Operator before examination carefully the presence of person, if any in the vicinity of running bay near the load scanner thus not negligently endangering the life and safety of the persons employed thereat, as required under the provisions of Regulation 181 & Regulation 42(1)(a) of the Metalliferous Mines Regulations, 1961 read with SOP (Standard Operating Procedure) framed for movement of LPDT.

iii) The Pickup van not been stopped on the running bay of HEMM near the load scanner where generally movement of HEMM takes place thus not negligently endangering the life and safety of the persons employed thereat, as required under the provisions of Regulation 181 & Regulation 41(1)(a) of the Metalliferous Mines Regulations, 1961 read with SOP (Standard Operating Procedure) framed for movement of LPDT.

This accident could have been averted.

Code : 0600 Electricity

Code : 0669 Other Electrical Accidents
(1 Death)

31. Date - 17.11.18 Mine - VASAVI GRANITES
Time - 7.30 Owner - M/S VASAVI GRANITE
Dist. - Prakasham, State - Andhra Pradesh
Person(s) Killed :
1. K. V. Reddy, Wiresaw Optr., Male, 32
Years

While a wiresaw machine operator in an opencast mine was passing by the Generator area, he inadvertently came in contact with the platform truck (on which a DG set was mounted) and charged with 230V due to faulty lighting cable, the wiresaw machine operator received electric shock which proved fatal.

Had,

i) the insulation resistance of installation and equipment of voltage not exceeding 650V maintained to atleast 1 MEGA OHM as required under Regulation 33(1)(ii) of CEAR, 2010 (Measures Relating to Safety and Electric Supply).

ii) the earthing of neutral conductor of a 3 phase, 4 wire system provided by not less than two separate and distinct connections with a minimum of two different earth electrodes as required under Regulations 41 & BIS 3043 of CEAR, 2010 (Measures Relating to Safety and Electric Supply).

iii) appropriate equipment suitably placed in the mines for automatically disconnecting supply to any part of the system where a fault including an earth fault occurs as required under Regulation 100(1), of CEAR, 2010 (Measures Relating to Safety and Electric Supply).

iv) failed in appointing electrical supervisors and electricians and also failed to provide such number of designated supervisors and electricians on duty while electricity is being used as required under Regulations 115(1)(V) of CEAR, 2010 (Measures Relating to Safety and Electric Supply).

this accident could have been avoided.

Code : 0700 Dust, Gas, & Other Combustible Material

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

32. Date - 28.02.18
Time - 8.15

Mine - DEMUALGAON OIL MINE
Owner - OIL & NATURAL GAS CORPORATION LTD.
Dist. - Sibsagar, State - Assam
Person(s) Killed :
1. Prashant Mohan, Welder, Male, 33 Years

While three contractual persons were engaged in fixing of vent pipe on the roof top of a wash tank at new Effluent Treatment Plant (ETP) of Demalgaon-Lakhmani Production Oil Mine, Assam ONGC, there was a powerful explosion in the tank to which a person got thrown away on ground from a height of about 13 meter sustaining serious bodily injuries to which he succumbed at a hospital and two other persons got stuck to railing of the tank and survived with serious bodily injuries.

In view of the above, this accident may be categorized as Mis-Adventure.

Code : 0800 Falls (Other than Falls of Ground)

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

33. Date - 31.03.18
Time - 21.30

Mine - PIPAL JORI STONE MINE
Owner - SMT. ARTI MANDHYAN
Dist. - Pakur, State - Jharkhand
Person(s) Killed :
1. Prem Mariyha, Outsider, Male, 26 Years

While a tipper driver was driving his tipper on a public road passing along the top edge of a quarry, suddenly he lost control over the tipper and fell down from 27m height along with tipper into the quarry and landed at quarry bottom; received serious bodily injuries and succumbed to his injuries on the spot.

Had,

i) Substantial fencing been provided and maintained along public road against the top of quarry excavation by a structure of permanent character sufficient to effectively prevent persons falling into the quarry as required under the provisions of Regulation 115(1)(a) and Regulation 115(1)(b) of the Metalliferous Mines Regulations, 1961;

ii) Proper benches of soil and stone been formed and the height and width of soil and stone benches at the northern edge of the quarry been made as required under the provisions of Regulation 106(1)(a) and Regulation 106(2)(a) of the Metalliferous Mines Regulations, 1961;

this accident could have been averted.

34. Date - 30.06.18
Time - 14.15

Mine - BVL EXPORT GRANITE MINE
Owner - M/S BVL EXPORT GRANITE MINE
Dist. - Prakasham, State - Andhra Pradesh
Person(s) Killed :
1. Bahor Saket, W.S. Opnr., Male, 24 Years

While a workman was pulling nylon rope from a slotter hole after completion of wire saw cutting at the edge of a stone bench of a dimensional stone quarry suddenly he slipped and fell from a height of 7.2m to lower bench over a wedge shaped stone measuring 1.01m x 0.4m x 0.16m causing grievous injuries and died while being taken to the hospital.

Had,

i) the person been stood away from the unguarded edge of a bench with due regards to safety as required of him under the provisions of Reg.181 and Reg. 41(1) of the Metalliferous Mines Regulation 1961,

ii) the edge of the bench been kept fenced/guarded to prevent the persons approaching edge, as required provision under Reg. 177(1) of the Metalliferous Mines Regulation 1961 read with condition No. 7 of the Permission granted under Reg. 106(2)(b) of the Metalliferous Mines Regulation 1961, vide letter no: HR2/SCZ/Perm-HEMM/106(2)(b)/39/(18)2018/276 Dated 16.01.2018,

iii) the person been imparted training before being engaged in the workings of the mine as required under the provisions of Rule No. 3 of the Mines Vocational Training Rules, 1966,

iv) the use of PPE by the workman been ensured while at work as required under the provisions of the Reg. 182 of the Metalliferous Mines Regulation 1961

this accident could have been averted.

35. Date - 07.07.18
Time - 16.30

Mine - DHEDWS IRON ORE MINE

Owner - JINDAL SAW LTD

Dist. - Bhilwara, State - Rajasthan

Person(s) Killed :

1. Praveen Sharma, Cont. Helper, Male, 36

Years

While a contractual mechanical helper was checking oil and water level of an excavator (ZX 650) at surface garage, he slipped and fall down from bonnet side of the machine on ground through a height of 2.65 m inflicting serious injury to which succumbed on the way to hospital.

Had,

(i) the PPE like safety belt been used or Safe operating procedures been followed while checking oil and water level of excavator thus not negligently endangering own life as required under the provisions of Reg. 182 C and Reg.181 of the Metalliferous Mines Regulations, 1961 and the maintenance work like checking of oil and water level of an excavator been done

(ii) under the supervision of a competent person as required under Regulation 39(1)(ii)&(iii) read with Reg. 42 of the Metalliferous Mines Regulations, 1961.

this accident could have been averted.

36. Date - 19.09.18
Time - 12.00

Mine - SRI SIDDI VINAYAKA STONE QUARRY

Owner - M/S SIDDI VINAYAKA STONE CRUSHER

Dist. - Guntur, State - Andhra Pradesh

Person(s) Killed :

1. A. Srinu, Driller, Male, 40 Years

While a workman was climbing up from the edge of a stone bench of an opencast mine, after clearing loose boulders from the ledge he suddenly slipped and fell upon a blasted rock from a height of 27 mt. causing grievous injuries and died while being taken to the hospital.

Had,

i) the person not been worked or travelled on any ledge or footpath less than 1.5m wide, from which he will be likely to fall more than 1.8m, unless he is protected by guard rails, fence or rope suitably fixed and sufficiently strong to prevent

him from falling as required under Reg. 118(4) of Metalliferous Mines Regulation 1961.

ii) Adequate precautions been taken to prevent danger to persons from falling in workings having an inclination of 30 degrees or more from the horizontal as required under Reg. 114 (1) of Metalliferous Mines Regulation 1961.

iii) the person not been worked or be permitted to work at any place having an inclination of 45 degree or more from the horizontal, where he is likely to slip or overbalance, unless he is secured by a safety belt or lifeline or is otherwise safeguarded as required under Reg. 114(2) of Metalliferous Mines Regulation 1961.

iv) the sides sloped at an angle of safety not exceeding 45 degrees from the horizontal and the height of the bench not exceeding 6m as required under Reg 106(2)(b) of Metalliferous Mines Regulation 1961, read with Permission No HR-2/SCZ/106(2)(b)/107(17)/2017/2124-25 dated 23.06.2017.

v) the foreman appointed to hold charge of the operation in the shift as required under Reg 37(1) (a)

vi) the owner or Manager appointed the competent person for thorough inspection and adequate supervision during the working shift as required under Reg 39(1)(a)(i) & (ii)

vii) the working placed under the charge of a Mining mate or others competent persons as required under Reg. 116(1)

viii) the working place inspected by the Mining Mate before commencement of work during the shift as required under Reg. 116(3)(d).

this accident could have been averted.

37. Date - 17.12.18
Time - 12.00

Mine - M D MARBLE MINE (ML 35/2001)
Owner - SHRI PRADHYUMAN SINGH
Dist. - Ajmer, State - Rajasthan
Person(s) Killed :

1. Shankar Nayak, Worker, Male, 25 Years

While a mine worker alongwith other two persons were entering into the mine workings of a marble mine through footpath, he suddenly slipped and fell down through a height of about 4m receiving serious bodily injury to which he succumbed on the way to hospital.

had,

i) a duly qualified manager been appointed for supervision, management, control and direction in the mine as required by the provisions of Regulation, 34(1)(a) of the Metalliferous Mines Regulations, 1961,

ii) persons not been allowed to work at any place/ledge from where they are likely to slip or overbalance to fall from more than 1.8m, height unless they were secured by a safety belt/full body harness of an approved type, suitably fixed to prevent them from falling, as required by the provisions of Regulation 118(4) of the Metalliferous Mines Regulations, 1961, read with DGMS Circular No. Tech. 3 of 2006 & DGMS Tech Circular (Approval) No. 06 dated 27.12.2010 and

iii) the top of the opencast working been kept securely fenced, every entrance from a roadway in mine, for the time being is neither being worked nor being used for any purpose, been provided with gate/barrier as required under regulation 115(1)(a) and (4) of the Metalliferous Mines Regulations, 1961 and Section 18(4) of the Mines Act, 1952,

this accident could have been averted.

38. Date - 19.12.18
Time - 15.00

Mine - NAWADA STONE QUARRY
Owner - RUPAK SINGH
Dist. - Koderma, State - Jharkhand
Person(s) Killed :
1. D.V. Mehta, Worker, Male, 28 Years

While four workers were charging shot holes on a stone ledge of about 3m (length) x 2m (wide) x 6m (height) in a stone quarry, suddenly one worker slipped and fell down on to the floor of the quarry from a height of about 6m, inflicting with fatal injuries.

Had,

i) work persons not been deployed to work on a stone ledge without protecting by the guard rails, fence or ropes to prevent from falling down in contraventions with Regulation 118(4) of the Metalliferous Mines Regulations, 1961

ii) the mine been placed under the charge of a manager holding prescribed qualifications as to ensure that all work in the mine was carried on in accordance with the provisions of the Mines Act, and of the Regulations, rules, bye laws and orders made there-under, as required by the provisions of Section 17(1) of the Mines Act, 1952, read with Regulation 34(1) of the Metalliferous Mines Regulations, 1961

this accident could have been averted.

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

39. Date - 08.07.18
Time - 10.30

Mine - JHANJHAR MARBLE MINE (ML 87/97)
Owner - M/S A.K. MARBLE
Dist. - Rajsamand, State - Rajasthan
Person(s) Killed :
1. Shivilal, Gen. Mazdoor, Male, 30 Years

While a person was collecting a grease gun kept near the toe of bottom bench for lubrication of excavator, pieces of stones got dislodged from sides of bottom bench, fell on his back from a height of about 9m, inflicting serious bodily injury due to which he succumbed later on.

Had,

i) the persons not been deployed at the place where sides in the excavation were not adequately benched, sloped or secured so as to prevent danger from fall of sides as required under Regulation 106(3) of the Metalliferous Mines Regulations, 1961,

ii) the loose stones in the sides of excavation been properly dressed to make and keep it secured as required under Regulation 106(4) of the Metalliferous Mines Regulations, 1961,

iii) the mine been placed under the charge of a duly qualified manager to ensure that all work in the mine was carried on in accordance with the provisions of the Mines Act, and of the regulations, rules, bye-laws and orders made there-under whereby safety of the mine and safety of persons employed in the mine was ensured in every respect, as required under the provisions of Regulation 34(1)(a) of the Metalliferous Mines Regulations, 1961 read with Section 17(1) of the Mines Act, 1952, and

iv) duly qualified mining mate(s) been appointed at the mine to exercise personal supervision to ensure proper observance of the provisions of the Mines Act and of the regulations, rules, bye-laws and orders made there under whereby safety of the

mine and safety of persons employed in the mine was ensured in every respect, as required by the provisions of Regulation 116 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

40. Date - 17.09.18 Mine - GLK-RDS DRILLING OIL MINE
Time - 15.30 Owner - OIL & NATURAL GAS CORPORATION LTD.
Dist. - Sibsagar, State - Assam
Person(s) Killed :
1. Uzzal Moram, Asst. Rigman, Male, 32 Years

While carrying out fishing operation, in a drilling rig of an Oil mine, the air winch sheave suddenly fell down from a height of 43 meters and hit a person working on derrick floor, thus sustaining serious bodily injuries to him, which proved fatal on the way to hospital.

Had,

the rotation of the air winch been immediately stopped after failure of manila rope attached to a drill pipe and thereafter the air winch sheave been inspected properly, thereby negligently not committing to ensure safety of persons employed therein, by contravening the provisions of Regulation 133 of the Oil Mines Regulations, 2017,

this accident could have been averted.

41. Date - 13.11.18 Mine - MEGHATUBURU IRON ORE MINE
Time - 11.30 Owner - RAW MATERIAL DIVISION (SAIL)
Dist. - West Singhbhum, State - Jharkhand
Person(s) Killed :
1. Khairul Sekh, Helper, Male, 43 Years

While a crew of four persons were engaged in shifting materials kept near a store constructed about 117.67m below the excavation area of an opencast mine, a number of boulders rolled down the hill slope fatally injuring one person on the spot and sustaining serious bodily injuries to another person where two other persons escaped unhurt.

Had,

the store not been negligently built below the excavation area thus not endangering the life of work persons engaged in the mine as required under the Regulation 181 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

42. Date - 13.12.18 Mine - TIRUPATI MARBLE MINES ML. 286/91
Time - 1.30 Owner - JANS DEVI CHOUDHARY
Dist. - Ajmer, State - Rajasthan
Person(s) Killed :
1. Bhagwati, Cont. Worker, Male, 40 Years

While a contractual worker alongwith other colleagues was working in a marble mine about 72m deep, a piece of stone fell down from the side of the mine through a height of 72m striking the head of one of the workers due to which he received head injuries and succumbed on the way to Hospital.

Had,

i) the sides of the opencast workings been kept benched or sloped at an angle of safety not exceeding 60 degree from horizontal or secured by dressing of loose

boulders or over hangs, whilst working the mine to prevent danger from fall of sides and the mine been worked by benching the sides top downwards as required by the provisions of Regulation 106(2)(3) & (5) of the Metalliferous Mines Regulations, 1961 and the Order under Section 22(3) of the Mines Act, 1952 imposed vide this Directorate's letter No AJ/DMS/Order u/s 22(3)/2009/1669, Ajmer, dated 02.04.2009

ii) the persons been engaged under the personal supervision of a competent person during working in night hours as required under Regulation 39 of the Metalliferous Mines Regulations, 1961.

iii) the personal protective equipment (PPE) been provided to work persons as required under Regulation 182 & 182A of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

Code : 0889 Other Accidents due to Falls
(2 Deaths)

43. Date - 06.02.18 Mine - TRIPURA SUNDARI MARBLE MINE (PL.87/92)
Time - 15.30 Owner - M/S KEDAR ENTERPRISES (MUKESH KR. MEENA)
Dist. - Banswara, State - Rajasthan
Person(s) Killed :
1. P.C. Meena, Excv. Optr., Male, 37 Years

While an excavator operator was trying to toppling a marble block measuring about 6.0m (H) x 3.0m (W) x 1.5m (T) in the bottom of the quarry, with the help of an excavator placed in front of this block in an opencast Metalliferous mine, a piece of this marble block got separated, slid along a plane, then fell on the cabin of excavator from a height of about 6m, in which the cabin got crushed, causing injuries to the operator inside the cabin to which he succumbed instantly.

Had,

(i) the operator been allowed to topple block of mineral (Phada) from a safer place and to follow safe code of practice, thus negligently not endangering the safety of himself as required under Regulation 181 of the Metalliferous Mines Regulations, 1961; and

(ii) the mine been placed under the charge of a duly qualified manager to ensure that all work in the mine was carried on in accordance with the provisions of the Mines Act, and of the regulations, rules, bye-laws and orders made there-under whereby safety of mine and safety of persons employed in the mine was ensured in every respect, as required by the provisions of Section 17(1) of the Mines Act, 1952, read with Regulation 34(1)(a) of the Metalliferous Mines Regulations, 1961 and the mine not been worked in contravention of stipulations of this Directorate's letter No. UR/4233 dated 03.09.2007, imposing order under Section 22A(2) of the Mines Act, 1952.

this accident could have been averted.

44. Date - 19.06.18 Mine - BAGHSURI QUARTZ & FELDSPAR MINE (ML 347/2)
Time - 14.45 Owner - SHRI SHIVPRASAD KABRA
Dist. - Ajmer, State - Rajasthan
Person(s) Killed :
1. Kalu, Daily Wages, Male, 27 Years

While three daily wages workers were engaged in loading of segregated quartz and feldspar from spoil dump located nearby but outside leasehold area of the mine, they were hit by reversing tractor due to which they fell into a ditch of depth about 1.5m near to the toe of spoil dump and struck with stone boulders inflicting

serious injuries to all, one of them was declared brought dead in hospital and others two were survived with serious bodily injuries.

Had,

i) the tractor not been negligently reversed without ensuring that the mazdoors are working in the vicinity thereby endangering their safety,

ii) a competent person been appointed to secure thorough supervision of persons working at waste dump and

iii) duly qualified manager been appointed in the mine for management, control, supervision and direction thereof

as required under the provisions of the Regulations 34, 39(1), 47(1)(b), 2(d), 5(b) and 181 of the Metalliferous Regulations, 1961 read with section 17 of the Mines Act, 1952

this accident could have been averted.

Code : 0900 Other Causes

Code : 0994 Buried in Sands, etc.
(1 Death)

45. Date - 04.02.18
Time - 5.15

Mine - PEARL GRANITE 55/6 B

Owner - PEARL MINERALS LTD.

Dist. - Prakasham, State - Andhra Pradesh

Person(s) Killed :

1. Tophan Dakua, Wire Saw Helper, Male, 24

Years

While a workman was standing close to the bottom of a bench of an opencast mine for pulling out the spilt wire rope, suddenly a part of the joint mass measuring about 1.6m x 0.6m x 0.2m slid and fell down from the side from a height of about 2.5m over him causing grievous injuries to which he succumbed almost instantly.

Had,

the dangerous place where the joint mass was hanging precariously and likely to slide been kept fenced to prevent the entry of workmen there, as required under Reg.177(1) of the Metalliferous Mines Regulation 1961 r.w condition No.6.4 & 26.4(b) of Permission letter No:HR2/SCZ/Perm-HEMM/106(2)(B)/12/5325 Dated: 20-11-2012 granted under Reg.106(2)(b) of Metalliferous Mines Regulation 1961,

this accident could have been averted.



2019



6. ACCIDENT ANALYSIS IN NON-COAL MINES: 2019

- The number of fatal accidents in non coal mines in the year 2019 stands at 45(Including 5 accident in Oil Mine) with 54 fatalities (Including 10 fatalities in Oil Mine) and 10 seriously injured (Including 1 injuries in Oil Mine) in these fatal accidents. The number of fatal accidents remains the same as compared to previous year 2018.
- The number of serious accidents in the year 2019 stands at 58 (including 18 serious accidents in Oil Mine) with 60 seriously injured persons (including 18 serious injuries in Oil Mine) seriously injured persons in these serious accidents. The number of serious accidents has increased as compared to previous year 2018.
- Among the broad category of causes, most number of fatal accident occurred due to “Fall of persons from height/into depth” and “Fall of Sides (other than overhangs)”. Most number of serious accident occurred due to “Fall of objects incl. rolling objects.”. Details can be seen in the statement 6.2.
- Maximum number of fatal accident occurred in Granite Mine. Maximum number of serious accident serious accident occurred in Oil Mines. Details can be seen in the statement 6.1.
- Maximum number of fatal accident occurred in the mines in each of the zones i.e. Northern Zone and South Central Zone of this Directorate and maximum number of serious accident occurred in the mines under Northern Zone of this Directorate.
- Major Accident :
 - Date of Accident: 13 March 2019; Mine Name: Ahmedabad Workover Mine; Mine Owner: ONGC; Number of Persons Killed: 6; Number of Persons Seriously Injured: 0
 - Cause of the Accident: While a group of seven persons was engaged in workover operations without any statutory supervision in an area which was surcharged with hydrocarbon gas cloud created at the site due to workover operations, when there was a sudden fire because of ignition caused by a mobile telephone operation by one of them, which engulfed the area inflicting severe burn injuries to 06 of them to which one succumbed instantly while remaining 5 persons succumbed over a period of time in the course of treatment in hospital in the next 20 days.
 - What could have averted this accident: Had,
 1. a separator vessel been provided on stream during mud circulation operations as a part of well activation procedures to separate HC gas and other fluids flowing out as well produce & for safe conduit/handling and disposal of gas after burning in a suitable flare stack, thus effectively preventing the formation of HC gas cloud about the rig and the activation tank, as required by the provisions of Regulation 62(2)(c) and Regulation 129(7)(a) & (b) of the OMR, 2017 read with clause 14.11(f) of the Standing Operation Practices framed for workover operations onshore in January, 2012 by M/s ONGC,

2. the workover operations for well activation been kept suspended in the absence of any direct supervision after the Installation Manager left the premises thus ensuring that well servicing operation in done only under the direct supervision of a competent person authorized for the purpose, as required under the provisions of Regulation 77(d) of the Oil Mines Regulations, 2017
 3. the carrying and use of mobile telephone in workover areas by persons employed been prevented by effective supervision thus not negligently or wilfully do anything likely to endanger life or limb in the mine or negligently or wilfully omit to do anything necessary for the safety of the mine or of the persons employed therein, as required under provisions of Regulation 133 read with Regulation 96(3) of the Oil Mines Regulations, 2017, and
 4. the persons employed in workover operations been provided with Basic Vocational Training on various risks and dangers associated with workover operations, as required under Rule 6 of the Mines Vocational Training Rules, 1966, this accident could have been averted.
- Recommendations: Recommended suitable action against the accused persons for lapses .

STATEMENT 6.1

Accidents and placewise casualties in non-coal mines by state-district wise in 2019

| 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. | Oil | | | | | | | | | | | | | | |
| | Assam | | | | | | | | | | | | | | |
| | Dibrugarh | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 |
| | Sibsagar | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| | TOTAL : ASSAM | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 |
| | Gujarat | | | | | | | | | | | | | | |
| | Gandhinagar | 1 | 1 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 1 | 0 | 1 |
| | Mehasana | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 1 |
| | TOTAL : GUJARAT | 4 | 1 | 0 | 0 | 0 | 9 | 0 | 9 | 0 | 0 | 0 | 2 | 0 | 2 |
| | Rajasthan | | | | | | | | | | | | | | |
| | Barmer | 1 | 11 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 10 | 1 | 11 |
| | TOTAL : RAJASTHAN | 1 | 11 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 10 | 1 | 11 |
| | ALL INDIA : OIL | 5 | 18 | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 18 | 1 | 19 |
| 2. | Barytes | | | | | | | | | | | | | | |
| | Andhra Pradesh | | | | | | | | | | | | | | |
| | Kadapa | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL : ANDHRA PRADESH | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | |
|---------------------------------|---|----|---|---|---|---|---|---|---|---|---|---|---|----|
| ALL INDIA : BARYTES | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| 3. Copper | | | | | | | | | | | | | | |
| Jharkhand | | | | | | | | | | | | | | |
| West Singhbhum | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : JHARKHAND | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| Rajasthan | | | | | | | | | | | | | | |
| Jhunjhunu | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : RAJASTHAN | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| <hr/> | | | | | | | | | | | | | | |
| ALL INDIA : COPPER | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 3 |
| <hr/> | | | | | | | | | | | | | | |
| 4. Galena & Sphalarite | | | | | | | | | | | | | | |
| Rajasthan | | | | | | | | | | | | | | |
| Bhilwara | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 4 |
| Udaipur | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 5 | 0 | 8 |
| Rajsamand | 1 | 3 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 3 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : RAJASTHAN | 1 | 15 | 0 | 0 | 0 | 1 | 0 | 1 | 7 | 1 | 0 | 7 | 0 | 15 |
| <hr/> | | | | | | | | | | | | | | |
| ALL INDIA : GALENA & SPHALARITE | 1 | 15 | 0 | 0 | 0 | 1 | 0 | 1 | 7 | 1 | 0 | 7 | 0 | 15 |
| <hr/> | | | | | | | | | | | | | | |
| 5. Gold | | | | | | | | | | | | | | |
| Karnataka | | | | | | | | | | | | | | |
| Raichur | 1 | 5 | 1 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 0 | 6 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : KARNATAKA | 1 | 5 | 1 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 0 | 6 |
| <hr/> | | | | | | | | | | | | | | |
| ALL INDIA : GOLD | 1 | 5 | 1 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 0 | 6 |
| <hr/> | | | | | | | | | | | | | | |
| 6. Granite | | | | | | | | | | | | | | |
| Andhra Pradesh | | | | | | | | | | | | | | |
| Prakasham | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| Srikakulam | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : ANDHRA PRADESH | 5 | 0 | 0 | 4 | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| Karnataka | | | | | | | | | | | | | | |
| Koppal | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|------------------------------|----|---|---|---|---|---|---|----|---|---|---|---|---|---|
| TOTAL : KARNATAKA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Madhya Pradesh Chhatarpur | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : MADHYA PRADESH | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rajasthan Ajmer | 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 |
| Telangana Mahaboobabad | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : TELANGANA | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| Uttar Pradesh Chitrakoot | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 2 |
| TOTAL : UTTAR PRADESH | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 2 |
| ALL INDIA : GRANITE | 11 | 0 | 1 | 8 | 1 | 1 | 0 | 11 | 0 | 3 | 0 | 0 | 0 | 3 |
| 7. Iron | | | | | | | | | | | | | | |
| Chhattisgarh | | | | | | | | | | | | | | |
| Bastar | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| Durg | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Dantewara | 1 | 3 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 3 |
| TOTAL : CHHATTISGARH | 1 | 6 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 4 | 0 | 6 |
| Jharkhand | | | | | | | | | | | | | | |
| West Singbhum | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 |
| TOTAL : JHARKHAND | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 |
| Maharashtra | | | | | | | | | | | | | | |
| Sindhudurg | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : MAHARASHTRA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Orissa | | | | | | | | | | | | | | |
| Keonjhar | 2 | 4 | 0 | 1 | 0 | 1 | 0 | 2 | 1 | 1 | 0 | 2 | 0 | 4 |

| | | | | | | | | | | | | | | |
|--------------------------|---|----|---|---|---|---|---|---|---|---|---|----|---|----|
| TOTAL : ORISSA | 2 | 4 | 0 | 1 | 0 | 1 | 0 | 2 | 1 | 1 | 0 | 2 | 0 | 4 |
| ALL INDIA : IRON | 4 | 13 | 0 | 3 | 0 | 1 | 0 | 4 | 1 | 3 | 0 | 10 | 0 | 14 |
| 8. Limestone | | | | | | | | | | | | | | |
| Himachal Pradesh | | | | | | | | | | | | | | |
| Solan | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : HIMACHAL PRADESH | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Karnataka | | | | | | | | | | | | | | |
| Gulbarga | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : KARNATAKA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Madhya Pradesh | | | | | | | | | | | | | | |
| Katni | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : MADHYA PRADESH | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| Rajasthan | | | | | | | | | | | | | | |
| Kota | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : RAJASTHAN | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : LIMESTONE | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 0 | 1 | 0 | 0 | 0 | 1 |
| 9. Manganese | | | | | | | | | | | | | | |
| Madhya Pradesh | | | | | | | | | | | | | | |
| Balaghat | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 1 |
| TOTAL : MADHYA PRADESH | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 1 |
| ALL INDIA : MANGANESE | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 1 |
| 10. Marble | | | | | | | | | | | | | | |
| Rajasthan | | | | | | | | | | | | | | |
| Udaipur | 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 |
| ALL INDIA : MARBLE | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11. Quartz | | | | | | | | | | | | | | |
| Rajasthan | | | | | | | | | | | | | | |
| Ajmer | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : RAJASTHAN | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| ALL INDIA : QUARTZ | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| 12. Sillimanite | | | | | | | | | | | | | | |
| Orissa | | | | | | | | | | | | | | |
| Ganjam | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| TOTAL : ORISSA | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| ALL INDIA : SILLIMANITE | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| 13. Stone | | | | | | | | | | | | | | |
| Andhra Pradesh | | | | | | | | | | | | | | |
| Guntur | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : ANDHRA PRADESH | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Haryana | | | | | | | | | | | | | | |
| Bhiwani | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : HARYANA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jharkhand | | | | | | | | | | | | | | |
| Koderma | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : JHARKHAND | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Karnataka | | | | | | | | | | | | | | |
| Bangalore | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : KARNATAKA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| Telangana | | | | | | | | | | | | | | |
| Medchal-Malkajgiri | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : TELANGANA | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tamil Nadu | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|-----------------------------------|----|----|---|----|---|----|---|----|----|----|---|----|---|----|
| Virudhunagar | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| Erode | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : TAMIL NADU | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 1 |
| <hr/> | | | | | | | | | | | | | | |
| Uttar Pradesh | | | | | | | | | | | | | | |
| Mahoba | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : UTTAR PRADESH | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| <hr/> | | | | | | | | | | | | | | |
| ALL INDIA : STONE | 8 | 0 | 0 | 12 | 0 | 0 | 0 | 12 | 0 | 3 | 0 | 0 | 0 | 3 |
| <hr/> | | | | | | | | | | | | | | |
| 14. Atomic Mineral | | | | | | | | | | | | | | |
| Andhra Pradesh | | | | | | | | | | | | | | |
| Kadapa | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : ANDHRA PRADESH | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| <hr/> | | | | | | | | | | | | | | |
| ALL INDIA : ATOMIC MINERAL | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| <hr/> | | | | | | | | | | | | | | |
| ALL INDIA : ALL NON-COAL MINERALS | 45 | 58 | 8 | 32 | 1 | 13 | 0 | 54 | 19 | 13 | 0 | 37 | 1 | 70 |

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

Number of accidents and casualties/seriously injured persons in non-coal mines by place and detailed cause in 2019

| 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 |
| Galena & Sphalarite | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Gold | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Manganese | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | 0 | 0 |
| TOTAL : FALL OF ROOF | 4 | 4 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 1 | 1 | 1 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 2 | 2 | 1 | 0 | 0 |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 |
| Iron | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Marble | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Quartz | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| TOTAL : FALL OF SIDES (OTHER THAN OVERHANGS) | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 3 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 6 | 6 | 4 | 0 | 0 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| TOTAL : FALL OF OVERHANGS | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| Galena & Sphalarite | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 |
| TOTAL : COLLAPSE OF SHAFT | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 |
| TOTAL : GROUND MOVEMENT | 4 | 4 | 1 | 2 | 2 | 5 | 5 | 4 | 0 | 0 | 2 | 2 | 1 | 1 | 1 | 11 | 11 | 6 | 3 | 3 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : BREAKAGE OF ROPE, CHAIN, CRAW/SUSPN. GEAR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Copper | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : HIT BY 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 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| Atomic Mineral | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : CONVEYORS | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Galena & Sphalarite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : DUMPERS | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| Gold | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : WAGON MOVEMENTS | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| Galena & Sphalarite | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 |
| Granite | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Iron | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : WHEELED TRACKLESS (TRUCK, TANKER, ETC.) | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 2 | 3 | 3 | 0 | 3 | 3 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| TOTAL : TRANSPORTATION MACHINERY (NON-WINDING) | 1 | 1 | 0 | 3 | 3 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 2 | 5 | 5 | 0 | 5 | 5 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Copper | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : DRILLING MACHINES | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : LOADING MACHINES | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : SHOVEL, DRAGLINES, FRONTEND LOADER, ETC. | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| Iron | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| Atomic Mineral | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : OTHER HEAVY EARTH MOVING MACHINERY | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 2 | 2 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 2 |
| TOTAL : OTHER NON-TRANSPORTATION MACHINERY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 3 | 3 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| TOTAL : MACHINERY OTHER THAN TRANSP. MACHINERY | 0 | 0 | 0 | 1 | 1 | 3 | 3 | 0 | 0 | 0 | 1 | 1 | 0 | 5 | 5 | 4 | 4 | 0 | 6 | 6 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| TOTAL : SECONDARY BLASTING PROJECTILES | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| TOTAL : MISFIRES/SOCKETS (WHILE DRILLING INTO) | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 0 | 0 |
| TOTAL : OTHER EXPLOSIVE ACCIDENTS | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| TOTAL : EXPLOSIVES | 0 | 0 | 0 | 0 | 0 | 6 | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 8 | 3 | 0 | 0 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 |
| TOTAL : OVERHEAD LINES | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : SWITCH GEARS,GATE END BOXES,POMMEL,ETC. | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Granite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : POWER CABLES OTHER THAN TRAILING CABLES | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : OTHER ELECTRICAL ACCIDENTS | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| TOTAL : ELECTRICITY | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 3 | 3 | 0 | 2 | 2 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 0 |
| TOTAL : OUTBREAK OF FIRE OR SPONTANEOUS HEATING | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| TOTAL : DUST, GAS & OTHER COMBUSTIBLE MATERIAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 2 |
| Barytes | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Copper | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| Galena & Sphalarite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 3 | 3 |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 2 | 2 |
| Sillimanite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Stone | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 |
| TOTAL : FALL OF PERSON FROM HEIGHT/INTO DEPTH | 1 | 1 | 0 | 1 | 1 | 4 | 4 | 1 | 1 | 1 | 1 | 1 | 0 | 7 | 7 | 6 | 6 | 1 | 9 | 9 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 5 | 5 |
| Copper | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 |
| TOTAL : FALL OF PERSONS ON THE SAME LEVEL | 1 | 1 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 4 | 4 | 0 | 5 | 5 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Copper | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Galena & Sphalarite | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Gold | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| Granite | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 2 |
| Sillimanite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : FALL OF OBJECTS INCL. ROLLING OBJECTS | 0 | 0 | 0 | 6 | 6 | 2 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 3 | 3 | 2 | 2 | 0 | 10 | 10 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Galena & Sphalarite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : OTHER ACCIDENTS DUE TO FALLS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|----|----|----|----|---|---|---|---|----|---|----|----|----|----|----|----|----|
| TOTAL : FALLS (OTHER THAN FALL OF GROUND) | 2 | 2 | 0 | 7 | 7 | 9 | 9 | 1 | 3 | 3 | 1 | 1 | 0 | 15 | 15 | 12 | 12 | 1 | 25 | 25 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 |
| TOTAL : DROWNING IN WATER | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 0 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 7 | 7 |
| Galena & Sphalarite | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 4 | 4 |
| Gold | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| Iron | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 4 | 5 |
| TOTAL : UNCLASSIFIED | 0 | 0 | 0 | 4 | 5 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 11 | 12 | 0 | 0 | 0 | 16 | 23 |
| TOTAL : OTHER CAUSES | 0 | 0 | 0 | 4 | 5 | 2 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 11 | 12 | 2 | 4 | 0 | 16 | 18 |
| ALL INDIA : ALL NON-COAL MINERALS | 8 | 8 | 1 | 17 | 18 | 29 | 33 | 8 | 5 | 5 | 8 | 13 | 1 | 36 | 37 | 45 | 54 | 10 | 58 | 60 |

STATEMENT 6.3

Fatal accidents and casualties in non-coal mines by broad cause in 2019

| Cause/Mineral | Oil | Copper | Galena | Gold | Iron | Lime- Stone | Mang- anese | Stone | Others | TOTAL |
|--------------------|-----|--------|--------|------|------|----------------|----------------|-------|--------|-------|
| Fall of Roof | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 4 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 1-0 | 0-0 | 0-0 | 3-1 | 0-0 | 0-0 | 4-1 |
| Fall of Sides | 2 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 3 | 7 |
| Killed-S/Injured : | 2-1 | 0-0 | 0-0 | 0-0 | 1-0 | 1-1 | 0-0 | 0-0 | 3-3 | 7-5 |
| Dumpers | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| Killed-S/Injured : | 0-0 | 0-0 | 1-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 1-0 | 2-0 |
| Trucks | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 3 |
| Killed-S/Injured : | 1-0 | 0-0 | 0-0 | 0-0 | 1-0 | 0-0 | 0-0 | 0-0 | 1-0 | 3-0 |
| Other Machinery | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 5 |
| Killed-S/Injured : | 1-0 | 1-0 | 0-0 | 0-0 | 1-0 | 1-0 | 0-0 | 1-0 | 0-0 | 5-0 |
| Explosives | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 6 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 6-2 | 2-1 | 8-3 |
| Fall of Persons | 0 | 2 | 0 | 0 | 1 | 3 | 0 | 2 | 2 | 10 |
| Killed-S/Injured : | 0-0 | 2-0 | 0-0 | 0-0 | 1-0 | 3-0 | 0-0 | 2-1 | 2-0 | 10-1 |
| Fall of Objects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 2-0 | 2-0 |
| Other causes | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 6 |
| Killed-S/Injured : | 6-0 | 0-0 | 0-0 | 0-0 | 0-0 | 1-0 | 0-0 | 3-0 | 3-0 | 13-0 |
| Belowground | 0 | 3 | 0 | 1 | 0 | 0 | 3 | 0 | 1 | 8 |
| Killed-S/Injured : | 0-0 | 3-0 | 0-0 | 1-0 | 0-0 | 0-0 | 3-1 | 0-0 | 1-0 | 8-1 |

| | | | | | | | | | | |
|--------------------|-----|-----|-----|-----|-----|-----|-----|------|------|------|
| Opencast | 0 | 0 | 0 | 0 | 3 | 6 | 0 | 8 | 12 | 29 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 3-0 | 6-1 | 0-0 | 12-3 | 12-4 | 33-8 |

| | | | | | | | | | | |
|--------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Aboveground | 5 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 8 |
| Killed-S/Injured : | 10-1 | 0-0 | 1-0 | 0-0 | 1-0 | 0-0 | 0-0 | 0-0 | 1-0 | 13-1 |

| | | | | | | | | | | |
|--------------------|------|-----|-----|-----|-----|-----|-----|------|------|-------|
| TOTAL | 5 | 3 | 1 | 1 | 4 | 6 | 3 | 8 | 14 | 45 |
| Killed-S/Injured : | 10-1 | 3-0 | 1-0 | 1-0 | 4-0 | 6-1 | 3-1 | 12-3 | 14-4 | 54-10 |

STATEMENT 6.4

Serious accidents and seriously injured persons in non-coal mines by broad causes in 2019

| Cause/Mineral | Oil | Copper | Galena | Gold | Iron | Lime- Stone | Mang- anese | Stone | Others | TOTAL |
|--------------------------------|--------|--------|--------|--------|--------|----------------|----------------|--------|--------|----------|
| Fall of Roof S/Injured : | 0 0 | 0 0 | 1 1 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 1 1 |
| Fall of Sides S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Dumpers S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Trucks S/Injured : | 1 1 | 0 0 | 2 2 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 3 3 |
| Other Machinery S/Injured : | 2 2 | 1 1 | 0 0 | 1 1 | 3 3 | 0 0 | 0 0 | 0 0 | 2 2 | 9 9 |
| Explosives S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Fall of Persons S/Injured : | 7 7 | 1 1 | 3 3 | 0 0 | 2 2 | 0 0 | 0 0 | 0 0 | 1 1 | 14 14 |
| Fall of Objects S/Injured : | 1 1 | 1 1 | 2 2 | 3 3 | 2 2 | 0 0 | 0 0 | 0 0 | 1 1 | 10 10 |
| Other causes S/Injured : | 7 7 | 0 0 | 7 7 | 1 2 | 6 7 | 0 0 | 0 0 | 0 0 | 0 0 | 21 23 |
| Belowground S/Injured : | 0 0 | 3 3 | 7 7 | 5 6 | 1 1 | 0 0 | 0 0 | 0 0 | 1 1 | 17 18 |

| | | | | | | | | | | |
|-------------|----|---|----|---|----|---|---|---|---|----|
| Opencast | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 1 | 5 |
| S/Injured : | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 1 | 5 |
| Aboveground | 18 | 0 | 7 | 0 | 9 | 0 | 0 | 0 | 2 | 36 |
| S/Injured : | 18 | 0 | 7 | 0 | 10 | 0 | 0 | 0 | 2 | 37 |
| ----- | | | | | | | | | | |
| TOTAL | 18 | 3 | 15 | 5 | 13 | 0 | 0 | 0 | 4 | 58 |
| S/Injured : | 18 | 3 | 15 | 6 | 14 | 0 | 0 | 0 | 4 | 60 |
| ----- | | | | | | | | | | |

STATEMENT 6.5**Regionwise/zonewise accidents in non-coal mines in 2019**

| Region/Zone | Fatal Accidents | | | Serious Accidents | |
|--------------------|------------------|------------|-----------|-------------------|-----------|
| | No. of Accidents | Fatalities | S/Injured | No. of Accidents | S/Injured |
| Koderma | 1 | 3 | 0 | 0 | 0 |
| Central Zone | 1 | 3 | 0 | 0 | 0 |
| Guwahati | 0 | 0 | 0 | 6 | 6 |
| Eastern Zone | 0 | 0 | 0 | 6 | 6 |
| Ahmedabad | 3 | 8 | 1 | 1 | 1 |
| Udaipur | 3 | 3 | 0 | 11 | 11 |
| North-Western Zone | 6 | 11 | 1 | 12 | 12 |
| Ajmer | 3 | 3 | 1 | 18 | 18 |
| Gwalior | 5 | 5 | 1 | 0 | 0 |
| Ghaziabad | 2 | 2 | 0 | 0 | 0 |
| Varanasi | 1 | 1 | 2 | 0 | 0 |
| Northern Zone | 11 | 11 | 4 | 18 | 18 |
| Goa | 1 | 1 | 0 | 0 | 0 |
| Hyderabad I | 2 | 2 | 1 | 0 | 0 |
| Hyderabad II | 8 | 9 | 0 | 2 | 2 |
| South-Central Zone | 11 | 12 | 1 | 2 | 2 |
| Bhubaneswar | 0 | 0 | 0 | 2 | 2 |
| Chaibasa | 5 | 5 | 0 | 7 | 8 |
| South-Eastern Zone | 5 | 5 | 0 | 9 | 10 |
| Bangluru | 2 | 3 | 1 | 0 | 0 |
| Bellary | 2 | 2 | 0 | 5 | 6 |
| Chennai | 1 | 1 | 1 | 0 | 0 |
| Southern Zone | 5 | 6 | 2 | 5 | 6 |
| Bilaspur | 1 | 1 | 0 | 6 | 6 |
| Jabalpur | 2 | 2 | 1 | 0 | 0 |
| Nagpur I | 3 | 3 | 1 | 0 | 0 |
| Western Zone | 6 | 6 | 2 | 6 | 6 |
| ALL INDIA | 45 | 54 | 10 | 58 | 60 |

STATEMENT 6.6**Fatal accidents in non-coal mines by cause and responsibility in 2019**

| 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 | 4 | 1 | 1 | 0 | 4 | 0 | 1 | 3 | 0 | 14 |
| Management & Sub. Sup. Staff(SSS) | 4 | 0 | 0 | 2 | 1 | 2 | 0 | 3 | 2 | 14 |
| Management, SSS & Coworker | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Management, SSS & Deceased | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 |
| Management, SSS & Others | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| Management & Coworker | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Management & Deceased | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| Management, Deceased & Others | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Management & Contractor's Worker | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Subordinate Supervisory Staff(SSS) | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| Coworker | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| Total | 11 | 1 | 5 | 4 | 6 | 3 | 1 | 12 | 2 | 45 |

STATEMENT 6.7**Summary of Findings of Fatal Accidents in Non-Coal mines during the year 2019**

 Code : 0100 Ground Movement

 Code : 0111 Fall of Roof
 (4 Deaths)

1. Date - 27.01.19 Mine - BALAGHAT MANGANESE MINE
 Time - 2.45 Owner - MANGANESE ORE [INDIA] LTD.
 Dist. - Balaghat, State - Madhya Pradesh
 Person(s) Killed :
 1. N.P. Netam, Driller, Male, 42 Years

While a person going towards face for roof bolting, suddenly two boulders parted from the supported roof, a piece of rock measuring about 1m length, 1m width and 0.3m thickness fell from height of 2.4m at a distance of 4.5m out by of the face on him inflicting serious injury to which he succumbed later-on on the way to hospital.

Had,

i) the working place was carefully examined as mentioned in Safe standard operating practices for dressing and supporting, framed and enforced in the mine;

ii) the supervisory officials carried out their respective duties to enforce the provisions of the Act, regulations and orders made there under to ensure safety of persons employed therein;

this accident could have been averted.

2. Date - 10.02.19 Mine - HUTTI GOLD MINE
 Time - 9.30 Owner - HUTTI GOLD MINES CO. LTD.
 Dist. - Raichur, State - Karnataka
 Person(s) Killed :
 1. Dawal Sab, Mate, Male, 49 Years

While a Mining Mate was dressing himself an un-supported roof of an old ore drive being widened, a mass of stone measuring 2.10m length x 1.60m width x 0.3m thick fell from the roof a height of 2.5m over him burying underneath stone mass inflicting fatal injury.

Had,

i) the roof at working place been kept secured and supported by a system of roof bolting in accordance with the requirements of the Code of Timbering Rules framed by the manager and the face not been worked in contravention, as required under Regulation 112 (2) (c);

ii) adequate supervision been provided by a mine foreman to hold general charge of district in each shift as required under Regulation 37(1) (a);

iii) the roof been properly examined to ascertain the conditions thereof and due care and precautions been taken before dressing of roof, as required under Regulation 116 (3) (b) read with Regulation 47(5) (b) of the Metalliferous Mines Regulation, 1961,

this accident could have been averted.

3. Date - 05.11.19
Time - 13.45

Mine - GFSR, BLOCK I MAGANESE MINE
Owner - J. K. MINERALS
Dist. - Balaghat, State - Madhya Pradesh
Person(s) Killed :
1. Dasharam Uke, Dresser, Male, 49 Years

While two persons were making preparation for re-setting a dislodged chock underneath unstopported roof, suddenly a mass of roof rock measuring about 1.7m in length x 1.2m width x 0.3m thick fell from a height of 2.4m inflicting fatal injuries to one person and serious injuries to the other person.

Had,

the roof/back been kept systematically supported in accordance with the provisions of regulation 112(2)(a) read with clause 3.0(a) of the approved Systematic Support Rules (Annexure A) enclosed with permission letter no. 380567/WZ/Nagpur Region No. I/Perm/2019/2020 dated 24/07/2019 granted under regulation 107(3) of the Metalliferous Mines Regulations, 1961;

this accident could have been averted.

4. Date - 05.12.19
Time - 13.30

Mine - UKWA MANGANESE MINE
Owner - MANGANESE ORE [INDIA] LTD.
Dist. - Balaghat, State - Madhya Pradesh
Person(s) Killed :
1. M. Panchtik, UG Worker, Male, 29 Years

While a worker of roof bolting crew went to a development heading to take drill rod, which he had left in the heading after drilling hole for roof bolting, suddenly a wedge shaped layer of stone roof rock, measuring 1.5m x 1.1 m x 0.4m separated from the roof and fell from a height of 3.0m on him inflicting serious bodily injuries to which he succumbed after about 5 hours.

Had,

the development heading been made and kept secure as required under the provisions of Reg. 112(1) and the roof been kept systematically supported in accordance with clause 5.1, 5.4 & 5.8 of the Systematic Support Rules also known as Timbering Rules framed under the provisions of regulation 112(2)(a) of the Metalliferous Mines Regulations, 1961 and enforced vide No. Ukwa/SSR/2018-19/2272/A dated 10.01.2018;

this accident could have been averted.

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

5. Date - 14.04.19
Time - 19.30

Mine - MANGALA OIL & GAS MINE
Owner - CAIRN ENERGY INDIA (P) LTD.
Dist. - Barmer, State - Rajasthan
Person(s) Killed :
1. J.K. Sahni, Cont. Emp., Male, 34 Years

While a group of contractual workmen were engaged in laying of 24" dia pipeline being constructed for transportation of oil from one installation to other in an oil mine, at a floor of trench measuring in a section of 8 am in width and 3.5m in height made in a sandy ground, suddenly side of trench collapsed resulting burial of one workman under the sand to which he died short while later and other escaped unhurt.

Had,

the person not engaged for laying of pipeline in a trench where effective support of sides was not provided to prevent collapse and SOP framed for laying of pipeline been followed as required under Regulation 82(1), and Regulation 25(d) of the Oil Mines Regulations, 2017 and clause 14.1 & 14.2 of Safety documents (Standard Operating Procedure).

this accident could have been averted.

| | | |
|----|---------------------------------|---|
| 6. | Date - 16.04.19 Time - 11.00 | Mine - GONDA GRANITE MINE Owner - SHRI SHIVMANGAL SINGH Dist. - Chitrakoot, State - Uttar Pradesh Person(s) Killed : 1. S. Bihari, Cont. Worker, Male, 47 Years |
|----|---------------------------------|---|

While two workers were operating the drill machine and one worker was cleaning the place with the help of iron brush near the high wall of a stone Quarry, loose boulders embedded and hanging on the high wall fell from a height of about 12m on them, due to vibration during drilling operation, inflicting serious bodily injuries to three. One of the seriously injured person succumbed almost instantaneously on the spot.

Had

i) the sides of the opencast workings been kept benched, sloped and secured whilst working the mine so as to prevent danger from fall of sides, as required by the provisions of Regulation 106(1) & Regulation 106(3) of the Metalliferous Mines Regulations, 1961,

ii) the mine been placed under the charge of a duly qualified manager to ensure that all activity in the mine were carried on in accordance with the provisions of the Mines Act, and of the regulations, rules, bye-laws and orders made there-under, whereby safety of persons employed in the mine was ensured in every respect, as required by the provisions of Section 17(1) of the Mines Act, 1952, read with Regulation 32(1) of the Metalliferous Mines Regulations, 1961, and,

iii) duly qualified mining mate been appointed at the mine to exercise personal supervision and ensure that all operations in the mine were done in accordance with the provisions of the Mines Act and Regulations, Rules, bye-laws and orders made there under as to ensure the safety of persons employed in the mine, as required by the provisions of Regulation 116 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

| | | |
|----|---------------------------------|---|
| 7. | Date - 24.04.19 Time - 10.45 | Mine - MINERALS AND METALS (KALANE IR. & MN. MINE) Owner - M/S MINERALS & METALS Dist. - Sindhudurg, State - Maharashtra Person(s) Killed : 1. Ajay Kumar, Excav. Optr., Male, 35 Years |
|----|---------------------------------|---|

While an excavator operator was engaged on haul road in levelling spilled muck, fell from the sides of benches, by an excavator in an opencast metalliferous mine and a mine foreman was supervising the job, suddenly a portion of the sides of six overlying benches measuring about 55m (L) x 58m (H) x 5-6m (W) parted and fell down burying the excavator operator, when trying to flee away from the place, causing fatal injury to the operator due to asphyxia, while the mine foreman managed to escape unhurt.

Had,

i) the risk assessment done before resumption of mining operation after a period of two years & accordingly Safety Management Plan was prepared & implemented as required under Regulation 181 of the Metalliferous Mines Regulations 1961 and read with Recommendation No. 1.14 of DGMS(Tech) Circular (MAMID)/05 dated 17.07.2013, thereby wilfully not omit to do anything necessary for safety of person employed in mine,

ii) the height and width of the benches been maintained as per the provisions of the Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961 and read with Condition No. 1.1 & 1.2 of the permission granted vide this Directorate's letter No. DG/RA-135/234-37 dated 29.01.2010,

iii) the mine and pit been designed scientifically taking into consideration of geotechnical parameters of rock including hydro geological and weather conditions to ensure stable pit slope profile not only during mining but also thereafter as required under Regulation 106 of the Metalliferous Mines Regulations, 1961 read with Para (i) of the DGMS Technical Circular/08 dated 23.09.2013 and

iv) the benches be properly inspected to detect for any sign of crack in benches as required under Regulation 44(1)(a), 45(1)&(2), 46(1)(c), 46(2)(b) and read with Regulation 106(3) of the Metalliferous Mines Regulations, 1961

this accident could have been averted.

8. Date - 24.05.19
Time - 11.30

Mine - MUNDOTI QUARTZ, FELSPER MINE
Owner - SMT. RATAN DEBI TAK
Dist. - Ajmer, State - Rajasthan
Person(s) Killed :
1. Jeetram, Mazdoor, Male, 30 Years

While a workman was engaged as a helper to excavator operator at a floor of open pit working having 20m vertical high wall and fractured rock mass, suddenly a overhanging rock mass measuring about 10m length x 2.5m height x 3m width fell from side over the workman and excavator machine, in which the workman buried under the mass of rock resulting into instantaneous death and excavator operator escaped with minor injuries.

Had,

i) side of the open pit working been adequately benched, sloped or secured so as to prevent danger of fall of the side,

ii) a duly qualified Manager been appointed for management, control, supervision and direction of the mine and

iii) the work in the mine kept under the supervision of Mining Mate.

as required under the provisions of Regulation 106(3), Regulation 34(1)(a), Regulation 116 and 39 of the Metalliferous Mines Regulations, 1961 and Sections 17(1) and 18(1) & (4) of the Mines Act, 1952,

this accident could have been averted.

9. Date - 08.07.19
Time - 10.00

Mine - MEHSANA ENGINEERING SERVICES & WORKSHOP
Owner - OIL & NATURAL GAS CORPORATION LTD.
Dist. - Mehasana, State - Gujarat
Person(s) Killed :
1. Ishwar Munda, Cont. Worker, Male, 18 Years

While a group of 6 contractual persons were working at bottom in a civil excavation pit of size 10.9m x 8.6m x 4.5m for construction of close drain foundation in a GGS cum CTF Installation of an Engineering Services and Workshop oil mine, the mass of the earthen material of one of its face (side) wall of size 9m x 4.5m x 0.6m parted

and fallen over them, resulted fatal accident to one of them, serious bodily injuries to one another and three other got minor injuries.

Had,

i) the side wall of the civil excavation pit been kept cut slopped (step wise), or shored and strutted to hold the face (side) of the earth as required under the clause no. 4.4(c) of Standard Specification for General Civil and Structural Work (i.e Standard code of practice for Civil & Structural work) framed under Regulation 115 of the Oil Mines Regulations, 2017; and

ii) the persons employed for construction of close drain foundation work been provided with Basic Vocaitonal Training on various risks and dangers associated with construction work, as required under Rule 6 of the Mines Vocational Training Rules, 1966,

this accident could have been averted.

10. Date - 23.09.19
Time - .30

Mine - MASSARO KI OBRI SERPENTINE MINE (493/90)

Owner - M/S N.H.MARBLE

Dist. - Udaipur, State - Rajasthan

Person(s) Killed :

1. Kamlesh Meena, Exca. Optr., Male, 31

Years

While an excavator was about to shift the excavator at quarry bottom suddenly a piece of rock measuring about 1.5m x 1.0m x 0.7m detached from the quarry side and fell from a height of 28m over excavator cabin leading to injuries to which succumbed instatly.

Had,

i) sides of the quarry been adequately secured so as to prevent danger from fall of sides as required under the provision of Regulation 106(3) of the Metalliferous Mines Regulations, 1961 and

ii) Excavator operator carefully examine his working place before commencing work thus not negligently endangered his life as required under the provision of Regulation 181 of the Metalliferous Mines Regulations, 1961

this accident could have been averted.

Code : 0113 Fall of Overhangs
(1 Death)

11. Date - 29.03.19
Time - 17.35

Mine - SEJHA LIMESTONE & DOLOMITE MINE

Owner - M/S SKY PLAST MINING & MINERALS

Dist. - Katni, State - Madhya Pradesh

Person(s) Killed :

1. Naresh Singh, Mazdoor, Male, 45 Years

While two mazdoors were working beneath the undercut face of the OB bench of height about 13m having under-cut depth of 2.0m to 3.0m in a stretch of about 15m in a Limestone and Dolomite opencast mine, rock measuring 1.20m (L) x 1.0m (W) x 0.10m - 0.15m (thick) parted from a height of about 3.0m from overhang bench and fell over the two mazdoors killing one mazdoor at the site and inflicting serious bodily injuries to other.

Had,

i) the side of the mine been adequately benched, sloped or secured so as to prevent danger of fall of the side as required under the provisions of Regulations 106(3) of the Metalliferous Mines Regulations, 1961

ii) no person been permitted to undercut so as to cause overhanging as Mines Regulations, 1961 and

iii) a duly qualified Manager been appointed for management, control supervision and direction of the Metalliferous Mines Regulations, 1961 read with Section 17(1), 18(1) & (4) of the Mines Act, 1952.

this accident could have been averted.

Code : 0200 Transportation Machinery(Winding)

Code : 0225 Hit by Cages, Skip etc.
(1 Death)

12. Date - 17.12.19 Mine - SURDA COPPER MINE
Time - 4.15 Owner - HINDUSTAN COPPER LTD.
Dist. - West Singhbhum, State - Jharkhand
Person(s) Killed :
1. Suresh Banra, Cont. Emp., Male, 23 Years

While a crew of 08 person were engaged for mucking in sinking winder by using Grab loader, a large stone piece fell down from bucket inflicting serious bodily injuries to one person to which he succumbed after one hour in the hospital, while another person escaped wiht minor injuries.

Had,

i) centre rotary and working platform been installed and maintained proper in the grab loader as required under Regulation 172 of MMR 1961

ii) mechanical appliance been provided and used to align and adjust the grab loader over sinking bucket while grab loader was in motion as required under Regulation 174(4) of MMR 1961

iii) competent person been appointed for supervision of mucking operation of sinking shaft as required under Regulation 176(1) of MMR 1961

iv) not more than two persons been allowed to remain at the bottom of the shaft during mucking operation as mentioned in point no. 10 of SOP and large size stone boulder been broken into smaller size before putting it into the grab loader thereby not endangering life of the personl in the mine as required under Regulation 181 of MMR 1961.

this accident could have been averted.

Code : 0300 Transportation Machinery(Non-Winding)

Code : 0335 Dumpers
(2 Deaths)

13. Date - 09.04.19
Time - 8.20

Mine - SINDESAR KHURD GALENA & SPHALARITE
Owner - HINDUSTAN ZINC LTD.
Dist. - Rajsamand, State - Rajasthan
Person(s) Killed :
1. Deep Singh, Helper, Male, 31 Years

While a LPDT machine (HEMM) was being reversed on a surface parking area suddenly a contractual technician helper came in the way leading to head injury by front left wheel of the machine to which he later succumbed to his injuries.

Had,

i) LPDT been not negligently reversed as required under the provisions of regulation 171(1) of Metalliferous Mines Regulation, 1961 read with condition 9.0 of permission letter no. NWZ/Mech/M-51/270016/2018/6941 dated 06.11.2018,

ii) Technician helper not negligently endangered his life by going in unauthorized working area as required under the provisions of Regulation 181 of the Metalliferous Mines Regulations, 1961 and

iii) The reverse parking of vehicles in the parking lot clause incorporated in the SOP and enforced in the mine and also manned drop gate or similar arrangement provided in the parking lot.

this accident could have been averted.

14. Date - 20.12.19
Time - 6.00

Mine - VEERBHADRA GRANITE MINE
Owner - M/S VEERBHADRA MINERALS PVT. LTD.
Dist. - Prakasham, State - Andhra Pradesh
Person(s) Killed :
1. J. Biswayi, Cutter, Male, 27 Years

While a person was walking behind a still dumper, suddenly the dumper reversed and ran over by the rear right tyre inflicting serious bodily injuries to which he succumbed while being shifted to hospital.

Had,

i) the SOP being framed and implemented under Safety Management Plan to ensure that men and machine do not work in close proximity of each other as required under Reg. 181 106(2) (b) of Metalliferous Mines Regulation 1961 read with Condition no. 1(1), (ii) & 2(ix) of Part VII Annexure 106E of permission granted vide letter No. HR-2/SCZ/106(2) (b)/361(17)/2017/5270 dated 27.12.2017 and Recommendation No. 9.2 of 11th Conference on Safety in Mines.

ii) the driver been ensured that no person is endangered while reversing the vehicle at loading point after physical inspection as required under the condition no. 6(iv) of Part VI of Annexure 106E of permission granted vide letter No. HR-2/SCZ/106(2) (b)/361(17)/2017/5270 dated 27.12.2017 under Regulation 106(2) (b) read with Reg 42 of Metalliferous Mines Regulation 1961.

this accident could have been averted.

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

15. Date - 15.05.19
Time - 12.45

Mine - GANDHAMARDAN IRON ORE MINE
Owner - ORISSA MINING CORPN. LTD.
Dist. - Keonjhar, State - Orissa
Person(s) Killed :
1. Sagar Dehury, Outsider, Male, 31 Years

While a loaded tipper was travelling on the haul road of an opencast mine, hit berm on one side of the road, lost control of the vehicle, moved over the berm and fell to a depth of 10m sustaining serious injuries to the driver which turned into fatal after a period of 1 hour and 45 minutes.

Had,

i) the tipper driver been more careful and not moved his vehicle un-controlled over the berm thereby falling down from the berm causing injuries to him and,

ii) Security guard being careful and ensured that a driver with less competency not allowed to enter into the mine premises as required under the provision of Regulation 181 read with condition No. 15 of permission granted by this Directorate vide letter No. 330119/SEZ/Chaibasa Region/Perm/2018/0511 dated 18.01.2019 under Regulation 106(2) (b) of the Metalliferous Mines Regulations, 1961;

this accident could have been averted.

16. Date - 06.06.19
Time - 17.30

Mine - PRODUCTION MINE OF MEHSAND ASSET
Owner - OIL & NATURAL GAS CORPORATION LTD.
Dist. - Mehasana, State - Gujarat
Person(s) Killed :
1. V.S.G. Thakor, Cont. Emp., Male, 50 Years

While a crew of four contractual persons was engaged in transportation of parts of a sucker road pump for an oil well by a camper Mahindra vehicle, when the vehicle was stopped on a kutchra road for loading more parts and the supervisor was counting the parts, standing behind the vehicle on the road, suddenly the vehicle moved in reverse/backward direction and hit the supervisor, who fell down on the road and run over by it causing serious bodily injuries to which he succumbed after two hours in the hospital.

Had,

the camper Mahindra vehicle been not driven negligently in reverse direction, thus got endangering life of the person employed in the mine as required by the provision of Regulation 133 of Oil Mines Regulations, 2017

this accident could have been averted.

17. Date - 07.12.19
Time - 14.30

Mine - KATHARA RED GRANITE MINE
Owner - M/S FORTUNE STONE LTD.
Dist. - Chhatarpur, State - Madhya Pradesh
Person(s) Killed :
1. S.D. Yadav, Driller, Male, 42 Years

While a water tanker was being reversed to refill water into storage tank located near shelter in an opencast granite mine, it hit a person who was drinking water at storage tank, thereby inflicting serious bodily injuries to him, to which he succumbed at the spot.

Had,

the water tanker been not reversed in close proximity to a person while he was drinking water, thus not negligently omitted to ensure safety of persons in contravention of the provisions of Regulation 181 of the Metalliferous Mines Regulations, 1961; and

the spotter guided the driver to stop the tanker at safe distance from the person while reversing, thus not negligently omitted to ensure safety of persons in contravention of the provisions of Regulation 181 of the Metalliferous Mines Regulations, 1961;

rear vision cameras been maintained in tanker to see the area behind the tanker in contravention of the provisions of Regulation 172, DGMS Technical circular 12/2009 and read with Regulation 53(d) of the Metalliferous Mines Regulations 1961; Clause no. 426 of code of practices framed by the manager for refilling the water into a storage tank been followed thus not negligently omitted to ensure safety of persons in contravention of the provisions of Regulation 181 of the Metalliferous Mines Regulations, 1961, read with Regulation 46(2)(b) of the Metalliferous Mines Regulations 1961;

a suitable stop block of adequate strength been provided near the storage tank to prevent person from direct hit of HEMM, thus not negligently omitted to ensure safety of persons in contravention of the provisions of Regulation 181 of the Metalliferous Mines Regulations, 1961, read with Regulation 44(9) of the Metalliferous Mines Regulations 1961;

the accident could have been averted.

Code : 0400 Machinery Other than Transp. Machinery

Code : 0443 Loading Machines
(1 Death)

18. Date - 06.02.19
Time - 14.20

Mine - MEHSANA LODISTIC OIL MINE
Owner - OIL & NATURAL GAS CORPORATION LTD.
Dist. - Mehasana, State - Gujarat
Person(s) Killed :

1. Krunal Prajapati, Cont. Worker, Male, 28

Years

While a dismantled part of a drilling rig mast in a logistic oil mine was being lifted mobile crane in order to load on a trailer for transporting to the next designated site, one of the persons engaged in the said work was hit by the abrupt swing of the suspended part and received bodily injuries, to which he succumbed after half an hour.

Had,

i) it been ensured, before lifting the material by the crane that all persons who are present in the work radius (area of influence) of the crane and who are likely to be endangered because of the crane operation, ae physically removed to safety or work radius of the crane been kept isolated, as required under Regulation 133 read with Manager's Safe Operating Procedure No. 560.A dt. 07.08.18,

ii) such numbers of competent person including official been appointed/assigned the specific duty so as to secure, during the working shift, a thought supervision of all operations at the installation in the mine as required under Regulation 21(1)(b) read with Reg. 27(3) of the Oil Mines Regulation, 2017,

iii) job related training and relevant workplace safety awareness and training been imparted and provided to the contractor's workers engaged to operated the crane/lifting appliances in the mine as required under Regulation 105(3) read with Regulation 25(1)(c) & Reg. 27(3) of the Oil Mines Regulations, 2017,

iv) a signaling system been provided for giving signals for safe operations of the crane, where it was not possible for the crane-operator to a have a clear view of the part(load) being handled, as required under Regulation 104(3) read with Reg. 25(1)(d) of the Oil Mines Regulations, 2017,

v) only competent and trained operator of the crane been permitted/appointed to operate the crane in the mine as required under Regulation 104(5) read with, Reg. 25(1)(d) & Reg. 27(3) of the Oil Mines Regulations, 2017 and

vi) the crane (machinery) been operated by or under constant supervision of a competent person/official at the installation in the mine as required under Regulation 114(1) read with Reg. 33(1) of the Oil Mines Regulations, 2017.

this accident could have been averted.

Code : 0446 Shovel, Draglines, Frontend Loader, etc.
(2 Deaths)

19. Date - 01.05.19 Mine - KASHLOG LIMESTONE MINE
Time - 11.15 Owner - M/S AMBUJA CEMENT LTD.
Dist. - Solan, State - Himachal Pradesh
Person(s) Killed :
1. J.C. Thakur, HEMM Optr., Male, 54 Years

While an excavator was leveling ramp in opencast workings of a limestone mine, one of its track chain was placed precariously at the edge of the ramp on unconsolidated strata, which gave way due to which the excavator lost its balance, slid down and toppled from a height of about 2-3m, throwing the operator violently out of the cabin, inflicting serious injuries to which he succumbed on the way to hospital.

Had,

i) The excavator not been operated precariously at the edge of the ramp and track chain been kept at a minimum distance of 3m away from the edge as required under Regulation 181 of the Metalliferous Mines Regulations, 1961 read with clause no. 10(c)(4) of the Standard Operating Procedure dated 10.06.18 framed by the manager of the mine,

ii) the operation of levelling and finishing of the ramp been placed under the charge of a competent supervisor as required by condition No. 16 of permission under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961, granted vide letter No. 1338 dated 13.05.2004 and

iii) the operator closed the door of the cabin and fastened the seat belt as required under Regulation 181 of the Metalliferous Mines Regulations, 1961, read with clause no. 10.1.(3) and 10.2(a)(4) of the Standard Operating Procedure dated 10.06.18 framed by the manager of the mine,

this accident could have been averted.

20. Date - 22.06.19 Mine - DADAM STONE MINE
Time - 8.30 Owner - M/S HSIIDC LTD.
Dist. - Bhiwani, State - Haryana
Person(s) Killed :
1. S. Kumar, Exc. Optr., Male, 54 Years

While an excavator was side casting heap of blasted rock from the bench to the bed of quarry in an opencast masonry stone mine, boulders from the heap rolled down towards it. To escape from the boulders, the excavator retreated and traversed too close to the edge of the bench, thereby losing balance and toppled down from a height of about 10m followed by the boulders falling over the cabin of the excavator, inflicting serious bodily injuries to the operator to which he succumbed on way to hospital.

Had,

the area of blasted muck pile been inspected to identify possible hazards in the muck pile and to ascertain the adequacy of floor space before deploying the excavator at the toe of the muck pile towards the edge of the bench as required by the provisions of the SOP dated 25/05/2019 framed by the manager under clause 15.2

of the permission under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961, granted vide letter No. 574 dated 27/02/2019.

this accident could have been averted.

Code : 0448 Other Heavy Earth Moving Machinery
(1 Death)

21. Date - 05.02.19 Mine - BAILADILA IRON ORE MINE
Time - 8.30 Owner - NATIONAL MINERAL DEV. CORPN. LTD.
Dist. - Dantewara, State - Chhattisgarh
Person(s) Killed :
1. Vicky Soni, Maint. Asst., Male, 32 Years

While starting a hydra crane which was parked in reverse direction on downhill gradient in an opencast mine, immediately after starting of its engine, it picked up momentum in reverse direction on undulated downhill gradient and ran over a person, thereby inflicting serious bodily injuries to him, to which he succumbed on the spot.

Had,

effectiveness of the braking system of the hydra crane been ensured before removing the stopper beneath its rear wheel, thus not negligently or wilfully endangered life of the person employed therein, thereby not contravening the provisions of Regulation 176 (3) of the Metalliferous Mines Regulations, 1961;

entry of unauthorized person inside operator cabin been prohibited, thus not negligently omitting to ensure safety of persons employed therein, thereby not contravening the provisions of Regulation 181 of the Metalliferous Mines Regulations, 1961 read with SOP's issue number 01 dated 31.05.2016.

braking system of the hydra crane been maintained in safe working order creating unsafe conditions, thus not negligently and omitting to ensure safety of persons employed therein, thereby not contravening the provisions of Regulation 172 and 53(a) of the Metalliferous Mines Regulations, 1961 and Read with the conditions clause no. 18 of Permission issued vide letter No.3913 dated 08/11/18; and

examination of the safety features of hydra crane been carried out before putting into use, thus not negligently or wilfully endangered life of the person employed therein, thereby not contravening the provisions of Regulation 172 & 53 (d) of the Metalliferous Mines Regulations, 1961.

this accident could have been averted.

Code : 0500 Explosives

Code : 0553 Secondary Blasting Projectiles
(3 Deaths)

22. Date - 24.05.19 Mine - POKARNA GRANITE MINE II
Time - 12.20 Owner - POKARNA GRANITE LTD.
Dist. - Prakasham, State - Andhra Pradesh
Person(s) Killed :
1. M.V. Rao, Blaster, Male, 41 Years

While a blasting helper was extending the lead wires of instantaneous electric detonators connected to the detonating cord with mobile phone in his possession in an opencast working of a dimensional stone quarry, the detonator got initiated and detonated the explosive charge and subsequent resultant blast; the blasting projectiles of stone pieces have caused grievous injuries to the helper and died while being taken to hospital.

Had,

i) the persons engaged in use of explosive been ensured that he don't possess any apparatus of kind capable of producing light, flame or spark or could initiate the explosive charge as required of him under the provisions of Reg. 170 read with condition no. 10.7 of permission vide letter No. HR-2/SCZ/106(2)(b)/30(18)/2018/319 Dated 18.01.2018 granted under Regulation 106(2)(b) of Metalliferous Mines Regulation 1961,

ii) the blaster himself been coupled up the cable to the detonating leads with due safety as required under the provisions 163(3)(c)(d)&(f), of Metalliferous Mines Regulation 1961,

iii) the person been strictly adhere to the provisions of the act and of the Regulations and orders there under and any order issued by official with a view to safety under Reg 41 of Metalliferous Mines Regulation 1961,

iv) the foreman ensured that the subordinate officials and competent persons in his district carry out their duties in proper manner as required under Reg 45(2)(a) of Metalliferous Mines Regulation 1961,

v) the manager ensured that all operations carried on in connection with the mine are conducted in accordance with the provisions of this Act and of Regulations Bye-Laws orders made there under as required under section 18(4) of the Mines Act, 1952.

this accident could have been averted.

23. Date - 20.09.19
Time - 17.30

Mine - SLMI STONE QUARRY
Owner - B. VENKAT REDDY
Dist. - Medchal (Malkajgiri), State - Telangana
Person(s) Killed :
1. A. Balraj, Blaster, Male, 40 Years
2. G. Balraj, Helper, Male, 31 Years

While a Blaster alongwith his helper was connecting lead wires of charged holes for secondary blasting in a road metal stone quarry due to lightning accidental blast occurred inflicting fatal injuries to both of them.

Had,

the handling of detonators been discontinued during the approach of lightning storm as required under the provisions of the condition No. 10.3 of the permission granted under Regulation 106(2)(b) of Metalliferous Mines Regulations, 1961 vide letter No. HR-2/SCZ/106(2)(b)/98(16)/2016/2269 dated 19.07.2016 read with Regulation 181 of Metalliferous Mines Regulations, 1961.

this accident could have been averted.

Code : 0555 Misfires/Socketts(While Drilling into)
(2 Deaths)

24. Date - 13.03.19
Time - 22.00

Mine - MUTHURAYASWAMY STONE CRUSHER QUARRY
Owner - SRI HOMBEGOWDA
Dist. - Bangalore, State - Karnataka

Person(s) Killed :

1. Mahammad Ainul, Gen. Worker, Male, 46

Years

While two persons were drilling holes with jack-hammer on the bench of an opencast stone quarry for blasting, the drill rod penetrated into unknown misfire charge hole, which lead to explosion, causing serious bodily injury to both of them. One of them was declared brought dead by the doctors at the hospital after one hour and other person was seriously injured on his left eye, nose and left side of abdomen.

Had,

i) Manager, Foreman, Mining Mate & Blaster were appointed as required under the provisions of the Regulation 34, Regulation 37 and Regulation 39,

ii) Drilling and blasting operations were under personal supervision of a duly qualified Blaster for preparation of charges, charging and stemming of holes & firing as required under the provisions of Regulation 160,

iii) the misfire was clearly demarcated and had been dealt properly as per the provisions laid down under Regulation 167 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

25. Date - 08.05.19
Time - 8.30

Mine - AMMAN GRANITE MINE

Owner - AMMAN GRANITE

Dist. - Mahaboobabad, State - Telangana

Person(s) Killed :

1. B. Padma, Driller, Female, 28 Years

While two persons were drilling into a Granite block for slicing at the bed of a granite quarry by jack hammer drill the drill rod encountered an old charged hole and exploded due to which both the persons fell down inflicting serious bodily injuries to which one of them succumbed to death later in hospital.

Had,

i) it been ensured that the granite block was throughly cleaned or washed down with water and carefully examined for the presence of misfires or sockets before commencement of drilling on it as required under Regulation 168 of the Metalliferous Mines Regulations, 1961,

ii) a duly qualified manager been appointed to have overall management, control, supervision and direction of the mine as required under Seciton 17 of the Mines act, 1952 read with the Regulation 34(1) of the Metalliferous Mines Regulation, 1961,

iii) effective supervision of the mine workings been provided by appointing a Foreman/Mining Mate as required under Regulation 37(1)(a)/39 read with Regulation 116 of the Metalliferous Mines Regulations, 1961 and

iv) the persons employed in the mine been provided basic training as required under Rule 6 of the Mines Vocational Training Rules, 1966.

this accident could have been averted.

Code : 0559 Other Explosive Accidents
(3 Deaths)

26. Date - 24.07.19
Time - 13.45

Mine - DAHRA PATHAR KHADAN

Owner - DINESH CHANDRA AGARWAL

Dist. - Mahoba, State - Uttar Pradesh

Person(s) Killed :

1. B. Sahu, Outsider, Male, 26 Years

While two outsiders were walking on a haul road of a mine, 22 numbers of holes charged with 500gm of explosive in each hole and connected with instantaneous electric detonators went off prematurely due to sudden strike of lightening. One of the outsiders was buried under the blasted muck resulting into serious bodily injury to which he succumbed on the spot whereas the other one escaped with minor injuries.

Had,

i) it been ensured that all persons other than the assistant of the blaster have taken proper shelter and all of the persons within a radius of 300m been warned & withdrawn out from the mine with blowing of siren and electriccally exposed holes charged with explosive and connected with instantaneous electric detonators been covered with soil or any insulating material other than metal plate or conneciton of leads of instantaneous electric detonators of each hole been coiled and placed in the mouth of the holes as required under Regulation 164(1) & (1-A)(b) of te Metalliferous Mines Regulations, 1961 & DGMS Tech. Circular No. 1/1995 read with Section 18 of the Mines Act, 1952,

ii) the explosive been received, used and returned with signature of authorized person or official appointed by the owner of the mine and record regarding same being maintained properly as required under Regulations 156(3), 160 & 169(b) of the Metalliferous Mines Regulations, 1961 read with Section 18 of the Mines Act, 1952

this accident could have been averted.

27. Date - 16.10.19
Time - 14.20

Mine - M. BOOPATHY STONE QUARRY

Owner - M. BOOPATHY

Dist. - Erode, State - Tamil Nadu

Person(s) Killed :

1. P. Senthil, Driller, Male, 37 Years

2. S. Arumugam, Driller, Male, 35 Years

While two drillers were at bottom of the bench of opencast stone quarry, the misfired explosive cartridges present in shot holes on the top of the bench, got initiated by lightning and projectiles of the blasting hit the said drillers inflicting serious bodily injuries to which both of them succumbed on the spot.

Had,

i) a duly qualified manager been appointed for overall management, control, supervision, and direction of the mine during operation of the blasting as required under Regulation 34 of the Metalliferous Mines Regulations, 1961, read with section 17 of the Mines Act, 1952,

ii) Foreman been appointed in the mine to hold charge of the mine during blasting operation as required under Regulation 37 of the Metalliferous Mines Regulations, 1961,

iii) Mining Mate been appointed and workings been placed under the charge of mining mate as required under Regulation 39 read with Regulation 116 of the Metalliferous Mines Regulations, 1961,

iv) a duly qualified blaster been appointed for preparation of charges, charging and stemming of holes by him or under his personnel supervision and firing shots by himself as required under Regulation 39 read with Regulation 160 of the Metalliferous Mines Regulations, 1961

this accident should have been averted.

 Code : 0600 Electricity

 Code : 0663 Switch Gears, Gate End Boxes, Pommel, etc.
 (1 Death)

28. Date - 23.06.19 Mine - MADWA GRANITE MINE
 Time - 17.00 Owner - M/S KISAN MINERALS PVT. LTD.
 Dist. - Chhatarpur, State - Madhya Pradesh
 Person(s) Killed :
 1. G. Chaudhary, Helper, Male, 35 Years

While a machine helper touches the cover of 415V, 60HP starter panel of a wire saw machine in a opencast granite mine, received electric shock and fell down on the granite block where the starter panel was placed, succumbed to head injury and became unconscious, laer he died on the way to hospital.

Had,

i) the shifting work of the wire saw machine and associated starter panel been carried out under direct supervision of a person holding a certificate of competency and by a person holding a permit issued or by recognised the state government as under the provisions of regulation 29(1) of the Central Electricity Authority (Measures relating to Safety & Electric supply) regulations 2010 and

ii) the wire saw machine and starter panel, been tested and checked by a competent person, before put into services in a new position in such a manner as to ensure safety of human being, animals and property under the provision of regulation 115(3)(ii) of the Central Electricity Authority (Measures relating to Safety and Electric supply) regulations and

iii) the proper maintenance and through examination of the 60HP, 415 Volts started of wire saw machine and associated under the provisions of regulation 115(3)(i) of Central Electricity Authority (Measures relating to Safety and Electric supply) regulations, 2010,

this accident could have been averted.

 Code : 0665 Power Cables Other Than Trailing Cables
 (1 Death)

29. Date - 30.05.19 Mine - DINESH GRANITE MINE
 Time - 4.00 Owner - DINESH GRANITE EXPORTS
 Dist. - Srikakulam, State - Andhra Pradesh
 Person(s) Killed :
 1. A.K. Rao, Operator, Male, 46 Years

While a wire saw operator was trying to check a faulty wire saw machine in an opencast granite mine suddenly he put his bare foot in the nearby slish which was already charged by the faulty incoming power cable of the same wire-saw machine & received electreic shock and died on the way to hospital.

Had,

i) the cable connected between upstream circuit breaker (MCCB) and controlling starter of the wire saw machine been maintained in well insulated conditions to avoid any leakage from the conductor and having metalic covering of the cable electrically and mechanically continuous throughout such that to provide effective earthing under fault conditions as required under Regulation 104(i,ii, iii & iv)

read with regulatin 106(iv) of the central electricity authority (Measures Relating to Safety and Electric Supply) Regulations, 2010 and

ii) provided with an effective earth leakage protection in the upstream control circuit Breaker (MCCB) of the line to automatically disconnect the supply under the fault conditions as required under Regulation 100(1) 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)

30. Date - 08.02.19 Mine - MIDWEST GRANITE MINE
Time - 12.25 Owner - MIDWEST GRANITE PVT. LTD.
Dist. - Prakasham, State - Andhra Pradesh
Person(s) Killed :
1. Sk. Saleem, Casual Labour, Male, 45 Years

While a mazdoor was water servicing an excavator in an open cast granite mine by using water servicing gun, inadvertently, water fell on the live terminals of RCCB working as main for pump- motor statrer and received electric shock which proved fatal.

Had,

(i) all live parts so protected or enclosed as to prevent person accidentlly coming into contact with them and to prevent danger from water etc., as required under Regulation 104(iv) of CEAR, 2010 (Measures Relating to Safety and Electric Supply.)

(ii) Adequate precautions taken to ensure that no live parts are so exposed as to cause danger as required under Regulation 35(7) of CEAR, 2010 (Measures Relating to Safety and Electric Supply).

(iii) The effectiveness of the switchgear and the protective system be kept and maintained in working order as required under Regulation 100(3) of CEAR, 2010 (Measures Relating to Safety and Electric Supply).

(iv) Appropriate equipment suitably placed maintained in the mines for automatically disconnecting the supply to any part of the system, where a fault including and earth fault occurs as required under Regulation 100(1) of CEAR, 2010 (Measures Relating to Safety and Electric Supply).

(v) Thorough examination of all apparatus performed to prevent danger as required under Regulation 115(3)(i) of CEAR, 2010 (Measures Relating to Safety and Electric Supply).

This accident could have been averted.

Code : 0700 Dust, Gas, & Other Combustibe Material

Code : 0775 Outbreak of Fire or Spontaneous Heating
(6 Deaths)

31. Date - 13.03.19 Mine - AHMEDABAD WORKOVER OIL MINE
Time - 20.20 Owner - OIL & NATURAL GAS CORPORATION LTD.
Dist. - Gandhinagar, State - Gujarat

Person(s) Killed :

1. S.M. Singh, Cont. Worker, Male, 25 Years
2. S. Ansari, Cont. Worker, Male, 28 Years
3. C. Patel, Cont. Worker, Male, 25 Years
4. L. Thakor, Cont. Worker, Male, 37 Years
5. R. Mishra, Cont. Worker, Male, 27 Years
6. S. Das, Cont. Worker, Male, 24 Years

While a group of seven persons was engaged in workover operations without any statutory supervision in an area which was surcharged with hydrocarbon gas cloud created at the site due to workover operations, when there was a sudden fire because of ignition caused by a mobile telephone operation by one of them, which engulfed the area inflicting severe burn injuries to 06(Six) of them to which one succumbed instantly While remaining 5(five) persons succumbed over a period of time in the course of treatment in hospital in the next 20 days.

Had,

i) a separator vessel been provided on stream during mud circulation operations as a part of well activation procedures to separate HC gas and other fluids flowing out as well produce & for safe conduit/handling and disposal of gas after burning in a suitable flare stack, thus effectively preventing the formation of HC gas cloud about the rig and the activation tank, as required by the provisions of Regulation 62(2)(c) and Regulation 129(7)(a) & (b) of the OMR, 2017 read with clause 14.11(f) of the Standing Operation Practices framed for workover operations onshore in January, 2012 by M/s ONGC,

ii) the workover operations for well activation been kept suspended in the absence of any direct supervision after the Installation Manager left the premises thus ensuring that well servicing operation in done only under the direct supervision of a competent person authorized for the purpose, as required under the provisions of Regulation 77(d) of the Oil Mines Regulations, 2017

iii) the carrying and use of mobile telephone in workover areas by persons employed been prevented by effective supervision thus not negligently or willfully do anything likely to endanger life or limb in the mine or negligently or willfully omit to do anything necessary for the safety of the mine or of the persons employed therein, as required under provisions of Regulation 133 read with Regulation 96(3) of the Oil Mines Regulations, 2017, and

iv) the persons employed in workover operations been provided with Basic Vocational Training on various risks and dangers associated with workover operations, as required under Rule 6 of the Mines Vocational Training Rules, 1966,

this accident could have been averted.

Code : 0800 Falls(Other than Falls of Ground)

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

32. Date - 21.03.19 Mine - PERECHERLA THELLA QUARRY
Time - 12.25 Owner - VADDERA G.W.L.C COOPERATIVE SOCIETY LTD.
Dist. - Guntur, State - Andhra Pradesh
Person(s) Killed :
1. B. Srinu, Driller, Male, 34 Years

While a workman was descending along a ledge of a stone bench of an opencast mine, after clearing loose rock for preparing the site for drilling he suddenly slipped and fell over a blasted muck pile of stone from a height of about 6.06m causing grievous injuries and died while being taken to the hospital.

Had,

i) the person been not deployed or travelled on any ledge or footpath less than 1.5 meters wide, from which he will be likely to fall, unless he is protected by guard rails, fence or rope suitably fixed and sufficiently strong to prevent him from falling

ii) adequate precautions been taken to prevent danger to persons from falling in workings having an inclination of 30 degrees or more from the horizontal.

iii) the person not been worked or be permitted to work at any place having an inclination of 45 degrees or more from the horizontal, where he is likely to slip or overbalance, unless he is secured by a safety belt or life line.

iv) the opencast mine been worked by forming proper benches.

v) the workings been placed under the charge of a foreman to ensure safety of the persons.

vi) the workings been inspected by the Mining Mate and conducted the mining operations safely during the shift.

this accident could have been averted.

33. Date - 10.04.19
Time - 23.10

Mine - SURDA COPPER MINE
Owner - HINDUSTAN COPPER LTD.
Dist. - West Singhbhum, State - Jharkhand
Person(s) Killed :
1. Doman Mahali, Electrician, Male, 55 Years

While a workman deputed to check the battery of a locomotive stationed by the side of an ore transfer chute, he suddenly lost control and fell down to a depth of 55m into the ore transfer chute received serious bodily injuries and succumbed to his injuries on the spot.

Had,

i) the enterance to the ore transfer chute at 8L loco roadway been provided with an efficient fence so designed and constructed as to effectively prevent any person from entering or falling therein as required under Reg. 115(2) of the Metalliferous Mines Regulations, 1961;

the accident could have been averted.

34. Date - 04.07.19
Time - 13.00

Mine - JAJANG IRON & MANGANESE MINE
Owner - RUNGTA MINES PVT. LTD.
Dist. - Keonjhar, State - Orissa
Person(s) Killed :
1. Ram Munda, Cleaner, Male, 39 Years

While a workman was deployed on an elevated platform of a mobile screening plant, fell down from a height of about 2.5m on the bucket of a pay loader kept right beneath the working area sustaining serious injuries to which he succumbed instantaneously.

Had,

the pay loader operator been more careful and not parked the pay loader right beneath the working area of the mobile screening plant thereby causing injuries to him as required under the provisions of Regulation 181 of the Metalliferous Mines Regulations, 1961;

this accident could have been averted.

35. Date - 22.07.19
Time - 11.30

Mine - T.R. VARADHARJAN STONE QUARRY
Owner - T.R. VARADHARJAN
Dist. - Virudhnagar, State - Tamil Nadu
Person(s) Killed :
1. P. Periyasadayandi, Driller, Male, 42
Years

While two persons were drilling hole with a Jackhammer drill machine near the edge on a bench, the edge of the bench got separated and fell down due to which the drill machine alongwith the drillers fell down to bottom bench/ floor of the quarry inflicting serious bodily injuries to which one person succumbed and the other person escaped with injuries.

Had,

(i) the mine been worked properly by forming benches as required under Regulation 106(2)(a) of the Metalliferous Mines Regulations, 1961,

(ii) A duly qualified manager being appointed for overall management, supervision, direction and control of the mine as required under Regulation 34 of the Metalliferous Mines Regulations, 1961, read with section 17 of the Mines Act, 1952, and

(iii) the mining mate being appointed and workings placed under the charge of mining mate as required under Regulation 39 read with Regulation 116 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

36. Date - 18.09.19
Time - 6.20

Mine - KRISHNASAI GRANITES 2
Owner - SIDDA VENKATESWARA RAO
Dist. - Prakasham, State - Andhra Pradesh
Person(s) Killed :
1. S. Mohanthy, Driller, Male, 41 Years

While a person was engaged in assisting the operator of a wagon drill, placed at the edge of a stone bench in a dimesional stone quarry, suddenly he slipped, lost control and fell down from a height of about 7.0m to lower bench, inflicting serious bodily injuries to which he succumbed while being taken to hospital.

Had,

i) the Safe Management Plan been formulated and implemented, thereby not negligently or wilfully omit to do anything necessary for the safety of the persons employed in the mine as required under Regulation 181 of the Metalliferous Mines Regulations, 1961 read with Recommendation No. 9.2 of 11th Conference on Safety in Mines,

ii) the edge of the bench (dangerous place) been kept securely fenced as required under Regulation 177(1) of the Metalliferous Mines Regulations, 1961,

iii) the person been secured by a safety belt or life line or is otherwise safeguarded while working at the edge of bench (having an inclination of mere than 45 degrees from horizontal, where he is likely to slip or overbalance) as required under Regulation 114(2) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

37. Date - 31.12.19
Time - 18.00

Mine - MANGAMPET BARYTES MINE
Owner - ANDHRA PRADESH MINERAL DEV. CORPN. LTD.
Dist. - Kadapa(Y.S.R), State - Andhra Pradesh

Person(s) Killed :

1. A.S. Babu, Helper, Male, 23 Years

While a helper was ascending a dump druck (parked in a ore stock yard) at the rear side of it to unload oil barrel, in an opencast mine, suddenly he slipped, and fell over a stone of a stock pile from a height about 2.0m, inflicting serious bodily injuries to which he succumbed instantly.

Had,

i) the person been used of PPE as required under the Regulation 182 7 182A of the Metalliferous Mines Regulations, 1961 read with condition 2(h) of Annexure 106C of the Permission granted vide No. HR.2/SCZ/106(2) (b)/278(17)2017/4875 dated 04.12.2017

ii) the unloading of oil barrel been supervised by the officials thereby not creating unsafe conditions as required under the Reg. 36, 37, and 39(1) (a)(i)&(ii) 116 of the Metalliferous Mines Regulations, 1961 read with condition no. 20.3 of the Annexure 106A of the permission granted vide no. HR2/SCZ/106(2) (b)/278(17)2017/4875 dated 04.12.2017

iii) the maintenance of the machinery been supervised as required under Regulation 53(a) and 39(1)(a)(iii) of the Metalliferous Mines Regulations, 1961 read with condition no. 20.3 of the Annexure 106A of the permission vide no. HR2/SCZ/106(2) (b)/278(17) 2017/4875 dated 04.12.2017

iv) the safe operating procedure (SOP) been framed for loading and unloading of oil barrel and implemented as required under condition 2(a) of Annexure 106C of permission vide no. HR2/SCZ/106(2) (b)/278(17) 2017/4875 dated 04.12.2017

this accident could have been averted.

Code : 0882 Fall of Persons on the Same Level
(4 Deaths)

38. Date - 24.01.19
Time - 11.20

Mine - CHECHAT LIMESTONE MINE
Owner - STONE INTERNATIONAL PVT. LTD.
Dist. - Kota, State - Rajasthan
Person(s) Killed :

1. Bajrang Singh, Cont. Worker, Male, 52

Years

While a contractor worker was on his way to the working place, he slipped and fell on the stacked pile of tiles causing injuring to right side of his forehead to which he succumbed on the way to hospital.

Had,

i) the tiles been stacked properly leaving adequate space for movement of persons and kept the floor non slippery so as to prevent persons been exposed to danger of slip & trip, as required under the provision of Regulation 47 and 117 of the Metalliferous Mines Regulations, 1961.

ii) the contractor worker been provided with personal protective equipment i.e, protective footwear and safety helmet, as required under provisions of Regulation 182 & 182A of the Metalliferous Mines Regulations, 1961.

iii) It been ensured that the contractor worker wore protective footwear and helmet thus not negligently omitted to ensure safety of the person employed in contravention of Regulation 44(1) & (10) read with section 18 of the Mines Act 1952.

this accident could have been averted.

39. Date - 26.02.19
Time - 11.30

Mine - SURDA COPPER MINE
Owner - HINDUSTAN COPPER LTD.
Dist. - West Singhbhum, State - Jharkhand
Person(s) Killed :
1. Sandeep Roy, Loader, Male, 44 Years

While a workman was travelling through ladder-way laid on the floor of an underground metaliferous mine, he fell down causing injuries on his head and was immediately shifted to the hospital where he succumbed to his injuries within five minutes.

40. Date - 05.05.19
Time - 11.30

Mine - KUMBHKOT LIMESTONE MINE
Owner - ASSOICATED STONE INDUSTRIES (K) LTD
Dist. - Kota, State - Rajasthan
Person(s) Killed :
1. Ramlal, Workman, Male, 22 Years

While a workman was carrying head load of a kota-stone slab, measuring about 600mm x 450mm x 75mm (thickness) in size at production bench of an opencast mine for loading in into a truck, he fell down with the slab and received serious head injury taking him into state of Coma, due to impact of heavy head load falling onto him, to which he succumbed after five days in the hospital.

Had,

it been ensured that he was allowed to work in the mine unless wearing a helmet, as to prevent head injury in the event of accidental fall whilst carrying heavy head loads, as required by the provisions of Regulation 182A(1) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

41. Date - 16.10.19
Time - 9.15

Mine - SATALKHERI LIMESTONE MINE
Owner - ASSOCIATED STONE INDUSTRIES (KOTA) LTD.
Dist. - Kota, State - Rajasthan
Person(s) Killed :
1. Idrish Mohammad, Worker, Male, 35 Years

While a lading worker was walking on the floor of a Kota stone bench with patch of stone slurry mud, in the production pit of a opencast mine to pick a peice of Kote stone slab from previously stacked Kote stone slab nearby, suddenly he slipped and fell down on stacked slabs, which resulted into serious bodily injury to his frontal lobe of head and nose and was declared 'as brought dead' by the Doctor in the hospital after about fifteen minutes.

Had,

it been ensured that place of manual loading inspected prior to the commencement of loading operation and same being made safe and secure with removal of patch of stone slurry mud so as to prevent inadvertent felling down due to slipping, and to prevent head injury in the event of accidental fall while walking, as required under the provisions of Regulations 44(1), 45(1), 46(1)(a), 46(2)(b), 47(1)(a), 47(3)(a) & 181 of the Metallifefous Mines Regulations, 1961,

this accident could have been averted.

(2 Deaths)

42. Date - 01.03.19
Time - 16.30

Mine - EKALSINGHA GRANITE MINE
Owner - M/S MARUDHAR GRANITE
Dist. - Ajmer, State - Rajasthan
Person(s) Killed :
1. Mewa Ram, Worker, Male, 28 Years

While a mine employee was observing the status of waste dump of a mine, he slipped from boulders and came underneath sliding boulders, got serious bodily injuries and succumbed to death on the way to hospital.

Had,

i) a duly qualified manager been appointed for overall management, control, supervision and direction of the mine as required under provisions of Section 18(4), Section 17 of the Mines Act, 1952 read with Regulation 34(1) of the Metalliferous Mines Regulations, 1961,

ii) person not been allowed to work from where likely to fall more than 1.8m unless he protected by rope suitably fixed and sufficiently strong (safety belt) to prevent from falling as required by the provisions of the Regulations 118(4) of the Metalliferous Mines Regulation, 1961 read with DGMS Circular No Tech 3 of the 2006 and DGMS (Approval) No 06, dated 27.12.2010,

this accident could have been averted.

43. Date - 08.08.19
Time - 13.30

Mine - PURTHAGERI GRANITE MINE
Owner - MATHA OVERSEAS PRIVATE LTD.
Dist. - Koppal, State - Karnataka
Person(s) Killed :
1. Rudrappa, Worker, Male, 23 Years

While a worker was passing adjacent to a granite block of size 2.7 to 2.9m (L) x 2.05m (B) x 2.0m (ht), part of which was drilled and chiseled from main granite block for removal of the waste portion by an excavator, all of a sudden waste portion detached from main granite block and fell over the worker, burying him underneath thereby inflicting fatal injury.

Had,

i) the person been vocationally trained,

ii) the place kept securely fenced as required under Regulation 115(5) (a) of the Metalliferous Mines Regulations, 1961,

the accident could have been averted.

Code : 0900 Other Causes

Code : 0993 Drowning in Water
(4 Deaths)

44. Date - 18.02.19
Time - 12.30

Mine - INJEPALLI LIMESTONE MINE
Owner - VASAVADATTA CEMENT
Dist. - Gulbarga, State - Karnataka
Person(s) Killed :

1. Md. Phaishal, Sampling Tech., Male, 22

Years

While a team of seven technical persons engaged in collecting core samples of cement concrete structure at sump area of a mechanised opencast mine, one person found missing and thereafter found drowned in the sump.

Had,

due precautions been taken by the supervisory staff and officials to prevent danger to person from falling into sump and the workman not allowed in the vicinity of the water without using life-line or safety belt etc. as required under Regulation 46(2)(b), Regulation 47(1)(b), Regulation 43(1) and Regulation 114 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

45. Date - 09.11.19
Time - 12.30

Mine - PURNADIH NAWADA STONE MINE
Owner - SANJAY KUMAR RAY
Dist. - Koderma, State - Jharkhand
Person(s) Killed :

1. A.K.Singh, Agent, Male, 62 Years
2. A.K. Mehta, Worker, Male, 28 Years
3. B.K. Mehta, Worker, Male, 30 Years

While a group of persons were working at the toe of about 35-40m high bench in an opencast stone mine, suddenly a mass of stone and soil measuring about 55m x 18m x 20m thick fell down from a height of about 45-50m into waterlogged quarry of about 15-18m deep water, resulting in formation of about 5 to 6m high tide with high velocity, which hit all sides of quarry, including persons working on toe of first stone bench, in which three persons were pulled by return water and were drowned in waterlogged quarry and others escaped unhurt.

Had,

i) the work-persons were not been deployed on the toe of high bench for extraction of mineral as required by Order under Section 22(3) of the mines act, 1952 issued vide this Directorate's letter no. KR/1915, dated 16.05.2017,

ii) the sides in the mine been kept adequately benched, sloped or secured so as to prevent danger from fall of sides as required under Regulation 106(3) of the Metalliferous Mines Regulation, 1961;

iii) the mine been placed under the charge of a manager holding prescribed qualifications so as to ensure that all work in the mine carried on in accordance with the provisions of the Mines Act, and of the Regulations, rules, by laws and orders made there-under, as required by the provisions of Section 17(1) of the Mines Act, 1952, read with Regulation 34(1) of the Metalliferous Mines Regulations, 1961.

this accident could have been averted.



2020

7. ACCIDENT ANALYSIS IN NON-COAL MINES: 2020

- The number of fatal accidents in non coal mines in the year 2020 stands at 40 (Including 7 accident in Oil Mine) with 50 fatalities(Including 8 fatalities in Oil Mine) and 8 seriously injured persons (Including 1 injury in Oil Mine) 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 24 (including 8 serious accidents in Oil Mine) with 25 seriously injured persons (including 8 serious injuries in Oil Mine) in these serious accidents. 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 “Fall of Persons from Height/into Depth”. However, most number of serious accident occurred due to “Fall of objects incl. Rolling objects”. Details can be seen in the statement 7.2.
- Maximum number of fatal accident occurred in Stone Mine. Maximum number of serious accident occurred is also in Iron Ore Mine and Oil Mine. Details can be seen in the statement 7.1.
- Maximum number of fatal accident occurred in the mines in each of the zones i.e. Northern Zone, Southern Zone and South Eastern Zone of this Directorate and maximum number of serious accident occurred in the mines under Northern Zone of this Directorate.
- Major Accident:
 - Date of Accident: 28 February 2020; Mine Name: Billi Markundi Stone Mine; Mine Owner: Suresh Singh; Number of Persons Killed: 5; Number of Persons Seriously Injured: 2
 - Cause of the Accident: While seven members of drilling crew were waiting at the bottom of a high wall in an opencast workings of a stone quarry for starting drilling after cleaning of face by manual loaders, a block of stone measuring about 15 m (L) x 2 m (T) x 3m (W) fell from a height of about 58m (approx.) from high wall of the mine inflicting fatal injuries to five persons and serious injuries to two persons.
 - What could have averted this accident: Had,
 1. the sides of opencast workings been kept benched, sloped and secured and loose stones/boulders kept dressed off so as to prevent fall of sides as required by the under provisions of Regulation 106(1), (3) read with condition No. 2.4 of the permission granted under the provisions of Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961 vide this Directorate letter no. S 29020 VR(NZ)/34/2017-18/Sonebhadra-stone/241 dated 29.01.2018
 2. the mining mate (after temporary stoppage of work at the mine during blasting operation between 12:00 noon to 2 pm) inspected within two hours every party of the mine, in which persons have to work or pass during the shift and ascertained

the condition thereof as regards the state of the sides, and entrance to the area where highwall was present been fenced off to prevent persons inadvertently entering therein, and persons been not allowed to stand at the bottom of the highwall thus not negligently omitted to ensure safety of the bottom of the highwall thus not negligently omitted to ensure safety of the persons employed in contravention of sub Regulation 1(a) of Regulation 47 read with sub regulation 3(b) of Regulation 116 read with Reg. 115(2) read with Regulation 181 of the Metalliferous Mines Regulations, 1961.

3. The officials appointed at the mine not allowed drilling crew members in the opencast working unless manual loading of blasted stones was complete, simultaneous mucking and drilling operation been avoided in the face, thus negligently not omitted to ensure safety of persons as required under the provision of the sub Regulation 2 of Regulation 43 read with Regulation 181 of the Metalliferous Mines Regulations, 1961.
 4. The owner not employed those persons in the opencast workings who had not undergone the prescribed training as required under the provisions of Rule 6 of the Mines Vocational Training Rules, 1966., This accident could have been averted.
- Recommendations: Suitable strong action as deemed fit may be taken against delinquents for contravening the provisions of The Mines Act, 1952, The Metalliferous Mines Regulations, 1961 and The Mines Vocational Training Rules, 1966 contributing to the accident.

STATEMENT 7.1

Accidents and placewise casualties in non-coal mines by state-district wise in 2020

| 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. | Oil | | | | | | | | | | | | | | |
| | Andhra Pradesh | | | | | | | | | | | | | | |
| | Krishna | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL : ANDHRA PRADESH | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Assam | | | | | | | | | | | | | | |
| | Dibrugarh | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| | Tinsukia | 3 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL : ASSAM | 3 | 2 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 1 | 0 | 1 | 0 | 2 |
| | Gujarat | | | | | | | | | | | | | | |
| | Bharuch | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Gandhinagar | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | Mehasana | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| | TOTAL : GUJARAT | 2 | 1 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 |
| | Rajasthan | | | | | | | | | | | | | | |
| | Barmer | 1 | 5 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 5 | 0 | 5 |
| | TOTAL : RAJASTHAN | 1 | 5 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 5 | 0 | 5 |

| | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ALL INDIA : OIL | 7 | 8 | 0 | 0 | 0 | 8 | 0 | 8 | 0 | 1 | 0 | 8 | 0 | 9 |
| 2. Bauxite | | | | | | | | | | | | | | |
| Orissa | | | | | | | | | | | | | | |
| Koraput | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : ORISSA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : BAUXITE | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3. Chromite | | | | | | | | | | | | | | |
| Orissa | | | | | | | | | | | | | | |
| Jajpur | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : ORISSA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : CHROMITE | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4. Copper | | | | | | | | | | | | | | |
| Rajasthan | | | | | | | | | | | | | | |
| Jhunjhunu | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| TOTAL : RAJASTHAN | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| ALL INDIA : COPPER | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 5. Galena & Sphalarite | | | | | | | | | | | | | | |
| Rajasthan | | | | | | | | | | | | | | |
| Bhilwara | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| Udaipur | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| TOTAL : RAJASTHAN | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 4 |
| ALL INDIA : GALENA & SPHALARITE | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 4 |

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| 6. Gold | | | | | | | | | | | | | | |
| Karnataka | | | | | | | | | | | | | | |
| Raichur | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : KARNATAKA | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| <hr/> | | | | | | | | | | | | | | |
| ALL INDIA : GOLD | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| <hr/> | | | | | | | | | | | | | | |
| 7. Granite | | | | | | | | | | | | | | |
| Andhra Pradesh | | | | | | | | | | | | | | |
| Prakasham | 2 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : ANDHRA PRADESH | 2 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 |
| <hr/> | | | | | | | | | | | | | | |
| Kerala | | | | | | | | | | | | | | |
| Ernakulam | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : KERALA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| Madhya Pradesh | | | | | | | | | | | | | | |
| Chhatarpur | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : MADHYA PRADESH | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | |
| ALL INDIA : GRANITE | 4 | 2 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 0 | 2 |
| <hr/> | | | | | | | | | | | | | | |
| 8. Iron | | | | | | | | | | | | | | |
| Chhattisgarh | | | | | | | | | | | | | | |
| Durg | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dantewara | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| <hr/> | | | | | | | | | | | | | | |
| TOTAL : CHHATTISGARH | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 2 |
| <hr/> | | | | | | | | | | | | | | |
| Jharkhand | | | | | | | | | | | | | | |
| West Singbhum | 3 | 2 | 0 | 2 | 0 | 1 | 0 | 3 | 0 | 1 | 0 | 2 | 0 | 3 |
| <hr/> | | | | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TOTAL : JHARKHAND | 3 | 2 | 0 | 2 | 0 | 1 | 0 | 3 | 0 | 1 | 0 | 2 | 0 | 3 |
| Karnataka Bellary | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| TOTAL : KARNATAKA | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| Orissa Keonjhar | 2 | 3 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 2 | 0 | 3 |
| TOTAL : ORISSA | 2 | 3 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 2 | 0 | 3 |
| ALL INDIA : IRON | 7 | 8 | 0 | 4 | 0 | 3 | 0 | 7 | 0 | 3 | 0 | 6 | 0 | 9 |
| 9. Limestone Andhra Pradesh Kurnool | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : ANDHRA PRADESH | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Rajasthan Kota | 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 |
| ALL INDIA : LIMESTONE | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| 10. Manganese Madhya Pradesh Balaghat | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| TOTAL : MADHYA PRADESH | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| Maharashtra Nagpur | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : MAHARASHTRA | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | |
|---------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rajasthan Udaipur | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : RAJASTHAN | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : MANGANESE | 3 | 0 | 3 | 2 | 0 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 1 |
| 11. Marble Rajasthan Rajsamand | 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 |
| ALL INDIA : MARBLE | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12. Sandstone Rajasthan Bundi | 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 |
| ALL INDIA : SANDSTONE | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13. Silica Rajasthan Bharatpur | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : RAJASTHAN | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : SILICA | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14. Stone Andhra Pradesh Guntur | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | |
|------------------------|----|---|---|----|---|---|---|----|---|---|---|---|---|---|
| Prakasham | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : ANDHRA PRADESH | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bihar | | | | | | | | | | | | | | |
| Gaya | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : BIHAR | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| Haryana | | | | | | | | | | | | | | |
| Panchkula | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : HARYANA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jharkhand | | | | | | | | | | | | | | |
| Koderma | 3 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : JHARKHAND | 3 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kerala | | | | | | | | | | | | | | |
| Kollam | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : KERALA | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tamil Nadu | | | | | | | | | | | | | | |
| Villupuram | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 2 |
| Krishnagiri | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : TAMIL NADU | 3 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 0 | 2 |
| Uttar Pradesh | | | | | | | | | | | | | | |
| Sonbhadra | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 2 | 0 | 0 | 0 | 2 |
| TOTAL : UTTAR PRADESH | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 2 | 0 | 0 | 0 | 2 |
| ALL INDIA : STONE | 12 | 0 | 0 | 19 | 0 | 0 | 0 | 19 | 0 | 5 | 0 | 0 | 0 | 5 |

| | | | | | | | | | | | | | | |
|-----------------------------------|----|----|---|----|---|----|---|----|---|----|---|----|---|----|
| ALL INDIA : ALL NON-COAL MINERALS | 40 | 24 | 3 | 34 | 0 | 13 | 0 | 50 | 6 | 12 | 0 | 15 | 0 | 33 |
|-----------------------------------|----|----|---|----|---|----|---|----|---|----|---|----|---|----|

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

Number of accidents and casualties/seriously injured persons in non-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 |
| | 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 |
| Manganese | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| TOTAL : FALL OF ROOF | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| Granite | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| Manganese | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 3 | 8 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 8 | 4 | 0 | 0 |
| TOTAL : FALL OF SIDES (OTHER THAN OVERHANGS) | 0 | 0 | 0 | 0 | 0 | 6 | 12 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 12 | 4 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : FALL OF OVERHANGS | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : GROUND MOVEMENT | 1 | 2 | 0 | 0 | 0 | 7 | 13 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 15 | 4 | 0 | 0 |
| Bauxite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Granite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Iron | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 3 | 3 | 1 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 0 | 0 |
| TOTAL : DUMPERS | 0 | 0 | 0 | 0 | 0 | 5 | 6 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 6 | 7 | 2 | 1 | 1 |
| Iron | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 1 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : WHEELED TRACKLESS (TRUCK, TANKER, ETC.) | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 4 | 4 | 0 | 1 | 1 |
| TOTAL : TRANSPORTATION MACHINERY (NON-WINDING) | 0 | 0 | 0 | 0 | 0 | 8 | 9 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 10 | 11 | 2 | 2 | 2 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : DRILLING MACHINES | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |

| | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : CUTTING MACHINES | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Chromite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : LOADING MACHINES | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| Sandstone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : 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 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : CRUSHING & SCREENING PLANTS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| ----- | | | | | | | | | | | | | | | | | | | | |
| TOTAL : MACHINERY OTHER THAN TRANSP. MACHINERY | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 5 | 5 | 0 | 2 | 2 |
| ----- | | | | | | | | | | | | | | | | | | | | |
| Limestone | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : OTHER PROJECTILES | 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 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| ----- | | | | | | | | | | | | | | | | | | | | |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : OVERHEAD LINES | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : SWITCH GEARS,GATE END BOXES,POMMEL,ETC. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : POWER CABLES OTHER THAN TRAILING CABLES | 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 | 2 | 2 | 0 | 1 | 1 | 2 | 2 | 0 | 1 | 1 |
| ----- | | | | | | | | | | | | | | | | | | | | |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : EXPLOSION/IGNITION OF GAS/DUST ETC. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| TOTAL : WELL BLOWOUT (WITH FIRE) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| ----- | | | | | | | | | | | | | | | | | | | | |
| TOTAL : DUST, GAS & OTHER COMBUSTIBLE MATERIAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 |
| ----- | | | | | | | | | | | | | | | | | | | | |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |

| | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|----|----|---|---|---|----|----|---|----|----|----|----|---|----|----|
| Gold | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Granite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Iron | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 1 |
| Manganese | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| Marble | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 5 | 0 | 0 | 0 |
| TOTAL : FALL OF PERSON FROM HEIGHT/INTO DEPTH | 1 | 1 | 1 | 0 | 0 | 6 | 7 | 0 | 3 | 3 | 2 | 2 | 0 | 0 | 0 | 9 | 10 | 1 | 3 | 3 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 2 |
| TOTAL : 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 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Copper | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Galena & Sphalarite | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 3 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 2 |
| Silica | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : FALL OF OBJECTS INCL. ROLLING OBJECTS | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 4 | 4 | 2 | 2 | 1 | 6 | 7 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : OTHER ACCIDENTS DUE TO FALLS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : FALLS (OTHER THAN FALL OF GROUND) | 1 | 1 | 1 | 2 | 3 | 6 | 7 | 0 | 3 | 3 | 4 | 4 | 1 | 7 | 7 | 11 | 12 | 2 | 12 | 13 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| TOTAL : FLYING PIECES (EXCEPT DUE TO EXPLOSIVES) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| Galena & Sphalarite | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Gold | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 2 |
| TOTAL : UNCLASSIFIED | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 3 | 3 | 1 | 1 | 0 | 5 | 7 |
| TOTAL : OTHER CAUSES | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 4 | 4 | 2 | 2 | 0 | 6 | 6 |
| ALL INDIA : ALL NON-COAL MINERALS | 2 | 3 | 1 | 4 | 5 | 26 | 34 | 6 | 6 | 6 | 12 | 13 | 1 | 14 | 14 | 40 | 50 | 8 | 24 | 25 |

STATEMENT 7.3**Fatal accidents and casualties in non-coal mines by broad cause in 2020**

| Cause/Mineral | Oil | Copper | Galena | Gold | Iron | Lime- Stone | Mang- anese | Stone | Others | TOTAL |
|--------------------|-----|--------|--------|------|------|----------------|----------------|-------|--------|-------|
| Fall of Roof | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 2-0 | 0-0 | 0-0 | 2-0 |
| Fall of Sides | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 2 | 7 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 2-0 | 9-4 | 2-0 | 13-4 |
| Dumpers | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 2 | 1 | 6 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 3-1 | 0-0 | 0-0 | 3-1 | 1-0 | 7-2 |
| Trucks | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 1 | 0 | 4 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 2-0 | 1-0 | 0-0 | 1-0 | 0-0 | 4-0 |
| Other Machinery | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 5 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 1-0 | 4-0 | 5-0 |
| Explosives | 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 |
| Fall of Persons | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 4 | 1 | 9 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 1-0 | 2-0 | 0-0 | 1-1 | 5-0 | 1-0 | 10-1 |
| Fall of Objects | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| Killed-S/Injured : | 1-1 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 1-0 | 2-1 |
| Other causes | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| Killed-S/Injured : | 7-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 7-0 |

| | | | | | | | | | | |
|--------------------|-----|-----|-----|-----|-----|-----|-----|------|-----|------|
| Belowground | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 3-1 | 0-0 | 0-0 | 3-1 |
| Opencast | 0 | 0 | 0 | 0 | 4 | 1 | 1 | 12 | 8 | 26 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 4-1 | 1-0 | 2-0 | 19-5 | 8-0 | 34-6 |
| Aboveground | 7 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 1 | 12 |
| Killed-S/Injured : | 8-1 | 0-0 | 0-0 | 1-0 | 3-0 | 0-0 | 0-0 | 0-0 | 1-0 | 13-1 |
| ----- | | | | | | | | | | |
| TOTAL | 7 | 0 | 0 | 1 | 7 | 1 | 3 | 12 | 9 | 40 |
| Killed-S/Injured : | 8-1 | 0-0 | 0-0 | 1-0 | 7-1 | 1-0 | 5-1 | 19-5 | 9-0 | 50-8 |
| ----- | | | | | | | | | | |

STATEMENT 7.4**Serious accidents and seriously injured persons in non-coal mines by broad causes in 2020**

| Cause/Mineral | Oil | Copper | Galena | Gold | Iron | Lime- Stone | Mang- anese | Stone | Others | TOTAL |
|--------------------------------|--------|--------|--------|--------|--------|----------------|----------------|--------|--------|--------|
| Fall of Roof S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Fall of Sides S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Dumpers S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 1 1 | 1 1 |
| Trucks S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 1 1 | 0 0 | 0 0 | 0 0 | 0 0 | 1 1 |
| Other Machinery S/Injured : | 1 1 | 0 0 | 0 0 | 0 0 | 1 1 | 0 0 | 0 0 | 0 0 | 0 0 | 2 2 |
| Explosives S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 1 1 | 0 0 | 0 0 | 0 0 | 1 1 |
| Fall of Persons S/Injured : | 3 3 | 0 0 | 0 0 | 0 0 | 1 1 | 0 0 | 0 0 | 0 0 | 1 1 | 5 5 |
| Fall of Objects S/Injured : | 1 1 | 1 1 | 2 3 | 0 0 | 2 2 | 0 0 | 0 0 | 0 0 | 0 0 | 6 7 |
| Other causes S/Injured : | 3 3 | 0 0 | 1 1 | 1 1 | 3 3 | 0 0 | 0 0 | 0 0 | 0 0 | 8 8 |

| | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|----|
| Belowground | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| S/Injured : | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| Opencast | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 2 | 6 |
| S/Injured : | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 2 | 6 |
| Aboveground | 7 | 0 | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 14 |
| S/Injured : | 7 | 0 | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 14 |
| ----- | | | | | | | | | | |
| TOTAL | 8 | 1 | 3 | 1 | 8 | 1 | 0 | 0 | 2 | 24 |
| S/Injured : | 8 | 1 | 4 | 1 | 8 | 1 | 0 | 0 | 2 | 25 |
| ----- | | | | | | | | | | |

STATEMENT 7.5**Regionwise/zonewise accidents in non-coal mines in 2020**

| Region/Zone | Fatal Accidents | | | Serious Accidents | |
|--------------------|------------------|------------|-----------|-------------------|-----------|
| | No. of Accidents | Fatalities | S/Injured | No. of Accidents | S/Injured |
| Koderma | 4 | 5 | 1 | 0 | 0 |
| Central Zone | 4 | 5 | 1 | 0 | 0 |
| Guwahati | 3 | 4 | 0 | 2 | 2 |
| Eastern Zone | 3 | 4 | 0 | 2 | 2 |
| Ahmedabad | 1 | 1 | 1 | 1 | 1 |
| Surat | 1 | 1 | 0 | 0 | 0 |
| Udaipur | 2 | 3 | 0 | 1 | 2 |
| North-Western Zone | 4 | 5 | 1 | 2 | 3 |
| Ajmer | 2 | 2 | 0 | 8 | 8 |
| Gwalior | 2 | 2 | 0 | 0 | 0 |
| Ghaziabad | 2 | 2 | 0 | 0 | 0 |
| Varanasi | 1 | 5 | 2 | 0 | 0 |
| Northern Zone | 7 | 11 | 2 | 8 | 8 |
| Hyderabad II | 5 | 5 | 0 | 2 | 2 |
| South-Central Zone | 5 | 5 | 0 | 2 | 2 |
| Bhubaneswar | 2 | 2 | 0 | 0 | 0 |
| Chaibasa | 5 | 5 | 1 | 5 | 5 |
| South-Eastern Zone | 7 | 7 | 1 | 5 | 5 |
| Bangluru | 4 | 6 | 0 | 0 | 0 |
| Bellary | 2 | 2 | 0 | 3 | 3 |
| Chennai | 1 | 1 | 2 | 0 | 0 |
| Southern Zone | 7 | 9 | 2 | 3 | 3 |
| Bilaspur | 1 | 1 | 0 | 2 | 2 |
| Nagpur I | 2 | 3 | 1 | 0 | 0 |
| Western Zone | 3 | 4 | 1 | 2 | 2 |
| ALL INDIA | 40 | 50 | 8 | 24 | 25 |

STATEMENT 7.6**Fatal accidents in non-coal mines by cause and responsibility in 2020**

| Responsibility / Major Cause Group | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Total |
|------------------------------------|----------|----------|-----------|----------|----------|----------|----------|-----------|----------|-----------|
| Management | 4 | 0 | 6 | 3 | 0 | 1 | 1 | 7 | 1 | 23 |
| Management & Sub. Sup. Staff (SSS) | 4 | 0 | 1 | 0 | 0 | 1 | 1 | 2 | 0 | 9 |
| Management, SSS & Coworker | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Management, SSS & Deceased | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| Management, SSS & Others | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Management & Coworker | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Sub.Sup.Staff & Others | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Coworker | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Deceased | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Total | 8 | 0 | 10 | 5 | 0 | 2 | 2 | 11 | 2 | 40 |

Summary of Findings of Fatal Accidents in Non-Coal mines during the year 2020

Had,

(i) the persons not been engaged at the place where sides in the excavation were not adequately benched, sloped or secured so as to prevent danger from fall of sides as required under Regulation 106(3) of the Metalliferous Mines Regulations, 1961, and

(ii) the mine been placed under the charge of a duly qualified manager to ensure that all work in the mine was carried on in accordance with the provisions of the Mines Act, and of the regulations, rules, bye-laws and orders made there-under whereby safety of the mine and safety of persons employed in the mine was ensured in every respect, as required by the provisions of Section 17(1) and Section 18(1) & (4) of the Mines Act, 1952, read with Regulation 34(1)(a) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

| | | |
|----|---------------------------------|---|
| 3. | Date - 15.01.20 Time - 15.25 | Mine - GRANITE BUILDING STONE QUARRY Owner - ALIYARUKUTTY M Dist. - Kollam, State - Kerala Person(s) Killed : 1. N. Lakdra, Operator, Male, 29 Years 2. Thoufeek S.R, Operator, Male, 26 Years |
|----|---------------------------------|---|

While a rock breaker was engaged at the bottom of a 21m high near vertical bench along with an excavator which was engaged on the following bench of 7m height in an opencast mine, suddenly a mass of stone of about 16m long x 1.5m thick x 20m height parted and collapsed from the 21m high bench and the debris fell on both the rock breaker and excavator inflicting serious bodily injuries to both the operators, to which they succumbed on the spot.

Had,

i) a duly qualified manager been appointed for overall management, control, supervision and direction of the mine as required under the provisions of Regulation 34(1)(a) of the Metalliferous Mines Regulations, 1961 read with Section 17 of the Mines Act, 1952,

ii) Mine Foreman and Mining Mate been appointed in the mine to ensure that all work in the mine was done in accordance with the provisions of the Act and of the regulations, rules, bye laws and orders framed thereunder, as required under the provisions of Regulation 37(1)(a), Regulation 116(1) of the Metalliferous Mines Regulations, 1961,

iii) the opencast workings been kept adequately benched, sloped and secured, as required under the provisions of Regulation 106(2)(a) of the Metalliferous Mines Regulations, 1961,

iv) conditions specifying to work with heavy machineries for digging, excavation and removal of mineral been obtained and followed the condition mentioned therein, as required under the provisions of Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

| | | |
|----|---------------------------------|--|
| 4. | Date - 20.02.20 Time - 10.30 | Mine - R. DHANALAKSHAMI STONE QUARRY Owner - R. DHANALASHAMI Dist. - Villupuram, State - Tamil Nadu Person(s) Killed : 1. P. Ramakrishnan, Driller, Male, 46 Years |
|----|---------------------------------|--|

While three drillers were drilling hole with a jack hammer drill at the bottom of a bench in opencast stone quarry, suddenly a portion of stone measuring about 0.9m x

0.5m x 0.4m got dislodged from the side, from a height of about 2.5m above the drilling place and hit the drillers, inflicting serious bodily injuries to one driller to which he succumbed on the spot and other two drillers escaped with minor injuries.

Had,

i) a duly qualified manager been appointed for overall management, control, supervision, and direction of the mine as required under Regulation 34 of the Metalliferous Mines Regulations, 1961, read with section 17 of the Mines Act, 1952,

ii) a mining mate been appointed and workings been placed under the charge of the mining mate as required under Regulation 39 read with Regulation 116 of the Metalliferous Mines Regulations, 1961,

iii) the sides of the opencast workings been adequately benched and secured so as to prevent danger from fall of sides before employing persons at the bottom of the bench as required under Regulation 106(3) of the Metalliferous Mines Regulations 1961,

this accident could have been averted.

5. Date - 28.02.20
Time - 16.00

Mine - BILLI MARKUNDI STONE MINE, ARAJI N.4585
Owner - SHRI SURESH SINGH
Dist. - Sonbhadra, State - Uttar Pradesh
Person(s) Killed :

1. Sulender, Worker, Male, 24 Years
2. Chotelal, Worker, Male, 21 Years
3. Gulab, Worker, Male, 25 Years
4. R. Prahalad, Worker, Male, 28 Years
5. Shiv Charan, Worker, Male, 27 Years

While seven members of drilling crew were waiting at the bottom of a highwall in an opencast workings of a stone quarry for starting drilling after cleaning of face by manual loaders, a block of stone measuring about 15 m (L) x 2 m (T) x 3m (W) fell from a height of about 58m (apx.) from highwall of the mine inflicting fatal injuries to five persons and serious injuries to two persons.

Had,

i) the sides of opencast workings been kept benched, sloped and secured and all loose stones/boulders kept dressed off so as to prevent fall of sides as required by the under provisions of Regulation 106(1), (3) read with condition No. 2.4 of the permission granted under the provisions of Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961 vide this Directorate letter no. S 29020 VR(NZ)/34/2017-18/Sonebhadra-stone/241 dated 29.01.2018

ii) the mining mate (after temporary stoppage of work at the mine during blasting operation between 12:00 noon to 2 pm) inspected within two hours every party of the mine, in which persons have to work or pass during the shift and ascertained the condition thereof as regards the state of the sides, and entrance to the area where highwall was present been fenced off to prevent persons inadvertently entering therein, and persons been not allowed to stand at the bottom of the highwall thus not negligently omitted to ensure safety of the persons employed in contravention of sub Regulation 1(a) of Regulation 47 read with sub regulation 3(b) of Regulation 116 read with Reg 115(2) read with Regulation 181 of the Metalliferous Mines Regulations, 1961.

iii) the officials appointed at the mine not allowed drilling crew members in the opencast working unless manual loading of blasted stones was complete, simultaneous mucking and drilling operation been avoided in the face, thus negligently not omitted to ensure safety of persons as required under the provision of the sub Regulation 2 of Regulation 43 read with Regulation 181 of the Metalliferous Mines Regulations, 1961.

iv) the owner not employed those persons in the opencast workings who had not undergone the prescribed training as required under the provisions of Rule 6 of the Mines Vocational Training Rules, 1966

this accident could have been averted.

| | | |
|----|-----------------|---|
| 6. | Date - 08.09.20 | Mine - RASUN GRANITES MINE |
| | Time - .40 | Owner - M/S RASUN EXPORT PVT. LTD. |
| | | Dist. - Prakasham, State - Andhra Pradesh |
| | | Person(s) Killed : |
| | | 1. B. Mahankuda, Helper, Male, 24 Years |

While a person was engaged in helping the cutting of granite block(vertical cut) by wire saw machine, placed near the toe of bench, in an opencast granite mine, suddenly a rock mass the bench from a height of about 6.0m(length)x0.5m(breath)x0.5m-1.5m(thick), parted from the side of succumbed while being shifted to hospital."

Had,

(i) The side of the granite bench been secured so as to prevent danger form fall of sides as required under Regulation 106(3) of the Metalliferous Mines Regulation, 1961.

(ii) the working area, where the wire saw machine was placed for cutting granite block, been inspected for presence of loose side/overhang and ensured that no person is engaged in an area where there present aby loose side/overhang as required under Condition No.14 of Annedure-106B of permission granted vide letter no.HR-2/Perm-HEMM/NSRO/2010/802 dated 20.04.2010 of the permission granter under

Regulation 106(2)(b) of MMR 1961 read with Reg.42 of Metalliferous Mines Regulation, 1961.

This accident could have been averted.

| | | |
|----|-----------------|--|
| 7. | Date - 08.12.20 | Mine - BRIGHT QUARRY(GRANITE BUILD. STONE) |
| | Time - 14.45 | Owner - SHRI NISAMUDHEEN K.S |
| | | Dist. - Ernakulam, State - Kerala |
| | | Person(s) Killed : |
| | | 1. Rahul R, Helper, Male, 21 Years |

While an excavator helper was performing maintenance work on an excavator parked at the toe of 58m high bench of an opencast mine. Suddenly, a fractured boulder of mass measuring the size of about 55m x 27m x 3.5m was slided and fallen on the excavator. The excavator alongwith the helper fallen to the bottom of the pit to a depth of about 44m inflicting serious injuries to which helper succumbed.

Had,

i) a duly qualified manager been appointed for the overall management, control, supervision and direction of the mine as required under the provisions of Regulation 34(1)(a) the Metalliferous Mines Regulations, 1961 read with Section 17 of the Mines Act, 1952

ii) Mine foreman and amd Mining Mate been appointed in the mine to ensure that all work in the mine was done in accordance with the provisions of the Act and of the regulations, rules, bye-laws and orders framed thereunder, as required under the provisions of Regulation (1)(a), 116(1) of the Metalliferous Mines Regulations, 1961,

iii) the opencast workings been kept adequately benched, slopped and secured, as required under the provisions of Regulation 106(1)(a) of the Metalliferous Mines Regulations, 1961

iv) the persons employed in the mine been imparted vocational training as required under Rule 6 of the Mines Vocational Training Rules, 1966;

this accident could have been averted.

Code : 0113 Fall of Overhangs
(1 Death)

8. Date - 07.09.20 Mine - KHESMI PURNANAGAR STONE QUARRY
 Time - 16.30 Owner - RAM PRASAD SAW
 Dist. - Koderma, State - Jharkhand
 Person(s) Killed :
 1. Talo Tuddu, Driller, Male, 22 Years

While three contractor employees were pushing the blasted stone boulders from second bench to bed of the quarry, in an opencast stone mine, a stone piece measuring approximately 0.6m(L)X0.6(W)X0.5m thick fell down from a height of 6-7m, hitting one of the person causing serious injuries to which he succumbed on the way to hospital after about one hour.

Had,

i) the workers were not been deployed in the mine for extraction of stone from second stone bench in contravention of the order under Section 22(3) of the Mines Act, 1952 issued vide this Directorate's letter No.KR/2608, dated 05-08-2016;

ii) the sides of the stone bench been properly dressed after blasting and before deploying the work person to work on the stone bench as required under Regulation 181 of the metalliferous Mines Regulations, 1961;

iii) the sides in the mine been kept adequately benched, sloped or secured so as to prevent danger from fall of sides as required under Regulation 106(3) of the Metalliferous Mines Regulation, 1961;

iv) the duly qualified person been appointed as manager of the mine for supervision, management, direction and control as required under section 17 of Mines Act, 1952 read with Reg. 34(1) of the Metalliferous Mines 1961, and with order under Section 22(3) of the mines Act 1952 issued vide this Directorate's letter No. KR/2608, dated 05-08-2016;

v) the work person deployed in the mine been imparted a vocational training as required under Rule 6 of the Mine Vocational Training Rules, 1961;

Code : 0300 Transportation Machinery (Non-Winding)

Code : 0335 Dumpers
(7 Deaths)

9. Date - 07.01.20 Mine - GARE STONE MINE NO. 1294
 Time - 15.45 Owner - M/S KALYANI CON. PVT.LTD.
 Dist. - Gaya, State - Bihar
 Person(s) Killed :
 1. S. Kumar, Supervisor, Male, 42 Years

While a group of persons were standing near the excavator loading place and on termination point of a down gradient of about 1 in 8 and about 15m length ramp in an opencast stone mine, suddenly a truck parked on this ramp in reverse direction

got the movement and rolled back and hit the persons and run over to one person who succumbed to his injuries and another person was seriously injured and others escaped unhurt.

Had,

i. The driver handle the truck carefully and keep under his control and not parked negligently in reverse direction on a down gradient ramp without keeping adequate stop blocks under the tyres as required under condition No. 8.3.2 of the permission letter No. 517902/CZ/Koderma Region/Perm/2019/2174 Dhanbad, Dated 31.07.2019 granted under Regulation 106 (2) (b) of the Metalliferous Mines Regulations, 1961 read with and with Regulation 181 of the Metalliferous Mines Regulations, 1961,

ii. The gradient of the ramp been maintained at 1 in 10 and not more than 10m in one stretch as required under condition No. 2.6.5 of the permission letter No. 517902/CZ/Koderma Region/Perm/2019/2174 Dhanbad, Dated 31.07.2019 granted under Regulation 106 (2) (b) of the Metalliferous Mines Regulations, 1961,

iii. a duly qualified person been authorized in writing to act as manager in the absence of the mine manager to perform his duties as required under Regulation 34(7)(a) of the Metalliferous Mines Regulations, 1961;

iv. the workings in the mine been placed under charge of a mining mate or other competent person as required under Regulation, 116(1) of the Metalliferous Mines Regulations, 1961;

v. the truck driver allowed to work in the mine been imparted a vocational training as required under Rule 6 of the Mine Vocational Training Rules, 1961; and .

vi. the truck not belonging to management was not been allowed into mine without issue of valid gate pass by competent authority of the mine, after ensuring the roadworthiness of the mine as required under Recommendations of 8th National conference on safety in mines read with Regulation 181 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted,

10. Date - 09.01.20
Time - 12.10

Mine - PANCHPATMALI BAUXITE MINE

Owner - NATIONAL ALUMINIUM CO.

Dist. - Koraput, State - Orissa

Person(s) Killed :

1. B.K. Raju, HEMM Opnr., Male, 31 Years

While a dumper was moving on down-gradient of haul road of an opencast mine, the driver lost control, the dumper rolled down to the lower bench at 4 meter through the berm, the driver jumped off the dumper in panic and was run over under rear wheel and was killed instantaneously,

Had,

i) the dumper been operated defensively and the safe operating procedure been followed, thereby, not endangering life or limb in the mine as required under the provisions of Regulation 41(1)(a) read with Regulation 181 of the Metal Mines Regulations, 1961;

ii) the berm and gradient of haul road been provided and maintained as required under the provision of conditions of permission under Regulation 106(2)(b), Regulation 46(2)(b) of the Metal Mines Regulations, 1961;

this accident could have been averted.

11. Date - 25.06.20
Time - 1.45

Mine - MEGHATUBURU IRON ORE MINE

Owner - RAW MATERIAL DIVISION (SAIL)

Dist. - West Singhbhum, State - Jharkhand

Person(s) Killed :

1. Prahlad Pan, Operator, Male, 52 Years

While a loaded dumper was being reversed for unloading into hopper of primary crusher of an Opencast metalliferous mine, it toppled into the hopper inflicting fatal injuries to the operator.

Had,

i) sufficient stoppers/stop blocks been provided at the unloading point of the hopper as required under clause 14.11(b) of the Annexure to the permission under Regulation 106(2) (b) of the Metalliferous Mines Regulations, 1961 granted vide this directorate letter no. cr/1467, dated 06.05.2002

ii) spilled out ore been cleaned at the unloading point platform of the hopper to maintain the height of the stopper/stop block and thereby negligently not endangered life of person in the mine, as required under Regulation 181 of the Metalliferous Mines Regulation 1961 and

iii) the seat belt been fastened by the dumper operator as required under Regulation 182C of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

12. Date - 28.07.20
Time - 8.30

Mine - GANDHAMARDAN IRON ORE MINE
Owner - ORISSA MINING CORPN. LTD.
Dist. - Keonjhar, State - Orissa
Person(s) Killed :

1. P.K. Mohanta, Driver, Male, 45 Years

While a loaded truck was being reversed into the stockyard of an opencast metalliferous mine, it hit a person inflicting fatal injuries to him.

Had,

i) the movement of trucks been properly regulated so as to keep safe distance against the other truck as required under Rule No. 6 of the Safe Operating Procedure framed by manager under clause no. 20(a) of the permission under Regulation 106(2) (b) of the metalliferous mines regulations, 1961 granted vide this Directorate's letter no. 330119/SEZ/Chaibasa Region/Perm/2018/0511 dated 18.01.2019, and

ii) the driver been more careful while reversing his vehicle by maintaining a safe distance against the other truck as required under Regulation 181 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

13. Date - 25.08.20
Time - 14.30

Mine - PURNADIH NAWADA STONE MINE
Owner - SANJAY KUMAR RAY
Dist. - Koderma, State - Jharkhand
Person(s) Killed :

1. N. Mehta, Driver, Male, 47 Years
2. B. Das, Driver, Male, 32 Years

While a loaded tipper was being driven from bed of the quarry to surface on a haul road having gradient 1 in 7 in an Opencast stone mine, it suddenly rolled back, went off the road and fell down to a depth of about 25m in partially waterlogged area of the quarry, causing fatal injuries to the driver and serious injuries to another driver of the tipper waiting in queue on bed of the quarry over the cabin & bonnet of which, stone boulders of the falling tipper fell down, who later on succumbed to his injuries on the way to hospital after about three hours.

Had,

i) the work-persons not been deployed for extraction of mineral from bed of the quarry in contravention of the order under Section 22(3) of the Mines Act, 1952 issued vide this Directorate's letter No. KR/1915, dated 16.05.2017;

ii) the gradient of haul road been maintained at 1 in 16 and adequate parapet wall/berm been provided along the edge of haul road above the level of surrounding area as required by the order issued under section 22(3) of the Mines Act, 1952 vide this Directorate's letter KR/1915, dated 16.05.2017;

iii) width of the haul road not been maintained at about 3.0m to 4.5 against the required width of at least 12m as required under DG's Tech. Cir.no. 09/2008 read with Regulation 106(2) (b) of Metalliferous Mines Regulations, 1961;

iv) the competent and trained person been appointed as tipper driver for safe running of the tipper as required under the Regulation 39(1)(a)(iii) of the Metalliferous Mines Regulations, 1961;

v) a duly qualified person been authorized in writing to act as manager in the absence of the mine manager to perform his duties as required under Regulation 34(7)(a) of the Metalliferous Mines Regulations, 1961

vi) the western side quarry workings of the mine been kept under the supervision of a mining mate or other competent person as required under Regulation, 116(1) of the Metalliferous Mines Regulations, 1961; and

vii) the surveyed off tipper not been used in the mine without proper repair and maintenance as required under DGMS(Tech.) Cir no. 1 of 2009 read with Regulation 181 of the Metalliferous Mines Regulations, 1961;

this accident could have been averted.

14. Date - 19.11.20
Time - 2.25

Mine - GUA IRON ORE MINES
Owner - RAW MATERIAL DIVISION (SAIL)
Dist. - West Singhbhum, State - Jharkhand
Person(s) Killed :
1. N. Prasad, CISF, Male, 42 Years

While a driver was driving a Light Motor Vehicle (Jeep) in an opencast metalliferous mine, it was ran over by a loaded dumper at haul road junction inflicting fatal injuries to the patrolling Inspector seating on its co-driver's seat and serious bodily injuries to the driver.

Had,

(i) the haul road not been used by the Light Motor Vehicle, (i.e. other than heavy transport vehicle), as required under Clause 5.0(1) of the Annexure 'A' to the permission granted under Regulation 106(2)(b) of the MMR, 1961 vide letter No. S * 29020/24 / 18 / C * R / 330119 / 4061 Chaibasa, dated 14/8 / 2018

(ii) the Light Motor Vehicle not been allowed to be driven by an unlicensed person in the mine as required under Clause No.16 of the permission granted under Regulation 106(2)(b) of the MMR, 1961 vide letter No. S * 29020/24 / 18 / C * R / 330119 / 4061, Chaibasa, dated 14/8 / 2018

(iii) the illumination in conformity with standard of lighting of 10H Lux been provided at the area of haul road junction, where the natural light was insufficient, as required under Regulation 148(2) read with GSR 618(E) dated 28.04.2017 and Clause No. 9(I) of the Annexure 'A' to the permission granted under Regulation 106(2)(b) of the MMR, 1961 vide letter No. S * 29020/24 / 18 / C * R / 330119 / 4061 Chaibasa, dated 14/8 / 2018

(iv) traffic signal or warning signal or any other traffic control system been provided at the haul road junction thereby not negligently omitting the things necessary for the safety of the mine or persons employed therein as required under Regulation 181 of the MMR 1961, read with Rule No.3.1 of the Code of Traffic Rules

framed under Clause No.7 of permission granted under Regulation 106(2)(b) vide letter No. S * 29020/24 / 18 / C * R / 330119/4061 , Chaibasa, dated 14/8 / 2018 ,

(v) before crossing the haul road junction, speed of the dumper been reduced, both directions been looked after along the haul road, and then proceeded across the road if it is safe to do so, as required under Clause no. 12(C) (II) (e) of the Annexure 'A' to permission granted under Regulation 106(2)(b) of the MMR, 1961 vide letter No. S * 29020/24 / 18 / C * R / 330119 / 4061 Chaibasa, dated 14/8 / 2018 and

(vi) the dumper been driven defensively i.e. not driven rash and its horn or light signal by operating the dippers in dark hours been given while approaching the haul road junction as required under respective Rule Nos. 2.2 & 2.4 of the Code of Traffic Rules framed under Clause No.7 of permission granted under Regulation 106(2)(b) vide letter No. S * 29020/24 / 18 / C * R / 330119 / 4061 Chaibasa, dated 14/8 / 2018 ,

the accident could have been averted.

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

15. Date - 30.05.20 Mine - VIJAY-II IRON ORE MINE
Time - 17.00 Owner - M/S USHA MARTIN LTD.
Dist. - West Singhbhum, State - Jharkhand
Person(s) Killed :
1. J. Gope, Helper, Male, 28 Years

While a water tanker was parked at down grading haul road in an opencast metalliferous mine, suddenly it moved forward by gravity and ran over a workman inflicting serious bodily injuries to him to which he succumbed after one hour and fifteen minutes.

Had,

the water tanker been handled carefully and the parking brake/hand brake been engaged during parking, as required under Clause 12(C) of the Annexure 'A' and Rule no. 6(2) of the "Code of Traffic Rules" framed under Clause No. 7.0 of permission granted under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961 vide letter no. S-29020/42/18/CR/330365/4065 dated 14.08.2018 read with Regulation 42 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

16. Date - 01.09.20 Mine - LAXMIPURA LIMESTONE MINE
Time - 11.40 Owner - ASSOCIATED STONE INDUSTRIES (KOTA) LTD.
Dist. - Kota, State - Rajasthan
Person(s) Killed :
1. Bhola, Male, 22 Years

While an empty truck hired for transport of limestone slabs from mine stockyard to local market was going downhill gradient on haul-road of an opencast limestone mine, it's steering got failed on turning at the junction, the truck driver lost his control over it, resulting into its uncontrolled movement that subsequently toppled after hitting the berm opposite to driver cabin and inflicting serious bodily injuries to driver's helper who thrown out of the cabin window glass to which he succumbed after seven hours in hospital while driver escaped unhurt.

Had,

the truck not been used for loading, unless it was mechanically sound & safe in working order required under the provisions of Regulation 173 & 176(3), read with

clause 10.1 of permission under the Regulation 106(2)(b) of Metalliferous Mines Regulations, 1961; granted vide letter no. R/268/5373/AJ and;

the steering mechanism of truck been properly maintained in safe working order as required under the Regulation 172 of Metalliferous Mines Regulations, 1961;

this accident could have been averted.

17. Date - 24.10.20
Time - 10.15

Mine - KHANAK STONE MINE
Owner - SUKHI DEVI
Dist. - Panchkula, State - Haryana
Person(s) Killed :

1. Sandeep Kumar, Contract Worker, Male, 28

Years

While a hired loaded tipper was going downhill gradient on haul-road of an opencast stone mine, it's brake failed, the tipper became uncontrolled and toppled after hitting the berm: the tipper driver jumped out from the running tipper before toppling resulting into serious bodily injuries to which he succumbed instantly on the spot.

Had,

the tipper not been operated, unless it was mechanically sound & safe in working order thus negligently not omitted to ensure his own safety, as required under the provisions of Regulation 181 of Metalliferous Mines Regulations, 1961;

the braking system been examined once at least in every seven days, as required under the provisions of Regulation 176(5), of Metalliferous Mines Regulations, 1961, read with clause 4.11.2 of permission granted under the Regulation 106(2)(b) of Metalliferous Mines Regulations, 1961 vide letter no. S29024/GR/HR/Bhiwani/170/Per/106(2)(b)/2096 dated 04.08.2020 and

the braking system of the tipper been maintained properly in safe working condition as required under the Regulation 172 of Metalliferous Mines Regulations, 1961;

this accident could have been averted.

18. Date - 24.12.20
Time - 10.55

Mine - KARADIKOLLA IRON ORE MINE
Owner - CHOWGULE & CO. (P) LTD.
Dist. - Bellary, State - Karnataka
Person(s) Killed :

1. K. Shivakumara, Driver, Male, 33 Years

While a tipper was parked in a slightly inclined plane for loading ore and left it unattended in a scre screening plant of mechanised opencast iron ore mine, suddenly it started moving forward and the operator of the tipper tried to get into a moving tipper to stop it but slipped and fell down on ground and run over by right side rear wheel of the tipper inflicting serious bodily injuries to which he succumbed at the hospital after four hours.

Had,

(i) the Safe Operating Procedures (SOP) for loading and movement of vehicle prepared by management been implemented, thereby not negligently or wilfully omit to do anything necessary for safety of person employed in the mine as required under Regulation 181 of the Metalliferous Mines Regulations, 1961 read with Recommendation No. 1.8.1 of DGMS (Tech) Circular (MAMID)/05 dated 17.07.2013, DGMS (Tech) Circular (S&T)/05 dated 02.04.2016, DGMS Technical Circular No. 03 of 2019 dated 23.12.2019 and

(ii) a mine foreman and an official been appointed for thorough supervision of loading and transportation of ore at screening plant as required under provision of

the Regulation 37(1) and Regulation 39(1)(a) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

Code : 0400 Machinery Other than Transp. Machinery

Code : 0441 Drilling Machines
 (1 Death)

19. Date - 17.10.20 Mine - M. SUBRAMANI ROUGH STONE QUARRY
Time - 3.00 Owner - SHRI M. SUBRAMANI
Dist. - Krishnagiri, State - Tamil Nadu
Person(s) Killed :
1. Govindaswamy, Driller, Male, 41 Years

While a person was drilling hole with a jack-hammer at dark hours in an OCP stone mine, suddenly, the drill rod broken and hit driller on his private parts between the legs; inflicting serious bodily injuries to which he succumbed on the way to the hospital.

Had,

i) a duly qualified manager been appointed in mine for the overall management, control, supervision and direction under the provision of Sec 17 of the Mines act, 1952, read with Reg. 34(1)(a) of the Metalliferous Mines Regulations, 1961;

ii) statutory supervision been ensured so as to confirm that all works in the mine were being done in accordance with the provisions of the Mines Act, 1952 and of the Regulations framed thereunder, as required under the provisions of Regulation 37(1)(a) and Regulation 116(1) of the Metalliferous Mines Regulations, 1961;

(iii) the persons employed in the mine been imparted vocational training as required under Rule 6 of the Mines Vocational Training Rules, 1966;

(iv) the drill rod used is of good quality, thereby not negligently or willfully endangering the life of a person, as required under the provision of

Regulation 181 of the Metalliferous Mines Regulations, 1961; and

-this accident could have been averted.

Code : 0442 Cutting Machines
 (1 Death)

20. Date - 04.03.20 Mine - LUVKUSHNAGAR GRANITE MINE
Time - 6.45 Owner - M/S D.G. MINERALS PVT. LTD.
Dist. - Chhatarpur, State - Madhya Pradesh
Person(s) Killed :
1. Raju Ram, Operator, Male, 35 Years

While a Wire Saw Cutting Machine operator in sitting position was cutting/dressing a granite block near the control panel a piece of wire rope disjointed out from two ends of wire rope loop and flown out at abnormal high speed, thereby hit to the helmet of wire saw operator and inflicted serious head injury to which he succumbed and declared brought dead in the hospital.

Had,

i) a portable cabin been provided for operator of Wire Saw Cutting Machine to give sufficient protection against flying objects thus negligently not omitted to endanger the life of operator as required under the provisions of the Regulation 181 of the Metalliferous Mines Regulations, 1961 read with DGMS Tech Cir no. 02 of year 2019.

ii) the joints of wire rope been suitably made and strength of such joints been tested prior to placing it for its safe use as required under the provisions of the Regulation 181 read with Regulation 53(a) Metalliferous Mines Regulations, 1961.

iii) a duly qualified manager been appointed in the mine for inspection, supervision, control and giving directions as required under the provisions of the Regulation 34 of the Metalliferous Mines Regulations, 1961 read with Section 17(1) of the Mines Act, 1951.

iv) the Cutting/dressing of Granite block been done under the supervision of a Mine Foreman or a Mining Mate and competent person as required under the provisions of the Regulations 37, 39 & 116 of the Metalliferous Mines Regulations, 1961 read with Section 18(4) of the Mines Act, 1952

v) the Safe Operating Procedure with analysis of associated hazards like electric hazards, trapping hazards, impact hazard, cutting hazard, noise hazard, location of machine hazard etc., been framed and implemented in the mine as required under the provisions of the Regulation 181 read with DGMS Tech Cir no. 05 of 2016 & 03 of 2019.

this accident could have been averted.

Code : 0443 Loading Machines
(2 Deaths)

21. Date - 03.06.20 Mine - KALIAPANI CHROMITE MINE
Time - 17.15 Owner - M/S BALASORE ALLOYS LTD.
Dist. - Jajpur, State - Orissa
Person(s) Killed :
1. B.B.Das, Mate, Male, 49 Years

While a diesel generator container was being lifted by a crane and an excavator on overburden bench of an opencast metalliferous mine, suddenly, the crane was toppled and hit a person by its boom inflicting fatal injuries to him.

Had,

i) the safe work procedures and code of practices of the equipment, made under the condition no. 20 of permission under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961 granted vide letter no. BBR-CU/CH-12/P-106(2)(b)/2016/2770 Bhubaneswar, dated 24.11.2017 been followed.

ii) proper equipment been used for the purpose, thereby not wilfully omit to do anything likely to endanger life or limb of the persons employed therein as required under the Regulation 181 of Metalliferous Mines Regulations, 1961,

this accident could have been averted.

22. Date - 30.07.20 Mine - PALLAVA GRANITE MINE
Time - 15.20 Owner - PALLAVA GRANITES INDUS.(INDIA) (P) LTD.
Dist. - Prakasham, State - Andhra Pradesh
Person(s) Killed :
1. V. Brahmendra, Trainee, Male, 23 Years

While a person was moving backward on the haul road of a dimensional stone granite mine, suddenly he ran over by the front right tyre of block handler inflicting serious bodily injuries to which he succumbed while being shifted to hospital.

Had,

i) the code of practice been framed and implemented to ensure that the operator do not operate the machine when the person in such proximity as to be endangered him as required under Reg. 106(2) (b) of Metalliferous Mines Regulation 1961 read with condition no. 22.2.a of Annexure 106A & condition no. 1(i), of VII of Annexure 106E of permission granted vide letter no. HR-2/SCZ/106(2) (b)/163(18)/2018/1943 dated 23.04.2018;

ii) the driver been cautions and sound audible horn to warn persons, where persons may walk in unexpectedly as required under the condition no. 2(iii) of part-VI of annexure 106E of permission granted vide letter no. HR-2/SCZ/106(2) (b)/163(18)/2018/1943, dated 23.04.2018 under Regulation 106(2) (b) read with Reg-42 of Metalliferous mines Regulation 1961

this accident could have been averted.

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

| | |
|---------------------|--|
| 23. Date - 08.03.20 | Mine - SUTRA SANDSTONE MINE |
| Time - 8.00 | Owner - SHRI ASHOK KR. JAIN |
| | Dist. - Bundi, State - Rajasthan |
| | Person(s) Killed : |
| | 1. Radheshyam, Ex. Optr., Male, 27 Years |

While an excavator operator was marching the excavator from an open pit sandstone mine to the surface & widening an unused narrow road by dressing the sides of the waste dump on the way, about 5 m3 of debris slide from the side of the waste dump and fell over the cabin of the excavator inflicting serious bodily injuries to the operator to which he succumbed in the hospital.

Had,

i) the operator not negligently disobeyed the direction issued by the supervisor/competent person and not negligently marched the excavator through the unused, narrow and unsafe road rather than the designated road as required by Regulation 181 read with Regulation 41(1) (a) & (4) (b) of the Metalliferous Mines Regulations, 1961,

ii) the supervisor negligently not omitted to ensure that the excavator was marched to the surface as directed/assigned to him by the manager and not marched through the unused, narrow and unsafe road rather than the designated road as required by Regulation 181 read with Regulation 41(1) (a) and Regulation 42 of the Metalliferous Mines Regulations, 1961, and

iii) the manager negligently not omitted to ensure that the excavator was marched to the surface in his presence through the designated road as directed by him and provided for the proper discipline of the operator and the supervisor/competent person as required by Regulation 181 and Regulation 40(1) of the Metalliferous Mines Regulations, 1961, read with section 18(4) of the Mines Act, 1952,

this accident could have been averted.

 Code : 0600 Electricity

Code : 0663 Switch Gears, Gate End Boxes, Pommel, etc.
 (1 Death)

24. Date - 14.12.20 Mine - WORK OVER MINE
 Time - 13.30 Owner - OIL INDIA LTD.
 Dist. - Tinsukia, State - Assam
 Person(s) Killed :
 1. Binod Gogoi, Mechanic, Male, 38 Years

While a mechanic came in contact with the live conductor of a 440V change over switch, he got electrocuted and lost his life.

Had,

i) All live parts been so protected or enclosed as to prevent persons accidentally coming into contact with them and prevent danger as required under Regulation no. 104(iv) of CEAR, 2010 (Measures relating to safety and electric supply)

ii) The conducts accessible only to a designated person or are installed and protected so as to prevent danger as required under Regulation no. 37(i) of CEAR, 2010 (Measures relating to safety and electric supply)

iii) Apparatus been protected, worked and maintained in such a manner as to ensure safety of human beings, as required under Regulation 12(1) of CEAR, 2010 (Measures relating to safety and electric supply)

this accident could have been averted.

 Code : 0665 Power Cables Other Than Trailing Cables
 (1 Death)

25. Date - 09.09.20 Mine - BAGJAN WORKOVER MINE
 Time - 13.50 Owner - OIL INDIA LTD.
 Dist. - Tinsukia, State - Assam
 Person(s) Killed :
 1. A.K. Bordoloi, Engineer, Male, 25 Years

While an Electrical Engineer was trying to make electrical cable connections at 220V hurriedly, for powering portable, hand held grinding machine near cellar/well head with bare hands without implementing permit to work system for electrical installation, he received electric shock and succumbed to it.

Had,

i) SOP of 'Electrical permit to work system' been followed as required under Regulation no. 19(1) of CEAR, 2010 (Measures relating to Safety & Electric Supply) read with DGMS Tech Cir no. 2 of 2017 and

ii) suitably rated electrical insulated hand gloves been worn as required under Regulation 19(2) of CEAR, 2010 (Measuring Relating to Safety and Electric Supply).

this accident could have been averted.

 Code : 0700 Dust, Gas, & Other Combustible Material

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

26. Date - 03.10.20 Mine - ANKLESHWAR PRODUCTION OIL MINE
 Time - 16.45 Owner - OIL & NATURAL GAS CORPORATION LTD.
 Dist. - Bharuch, State - Gujarat
 Person(s) Killed :
 1. S. Vaghari, Helper, Male, 30 Years

While a gas cutting operation was being carried out by a welder on a foam pourer pipe line connected to a oil storage tank under maintenance filled with combustible hydrocarbon mixture, the flame travelled through pipeline and ignited hydrocarbon gases mixture inside the oil storage tank and caused explosion, resulting into severe burn injuries to an another workman who was standing over the roof of same tank holding the foam pourer pipe line and with impact of explosion he was thrown in air to a distance of 30m away, received serious bodily injuries to which he succumbed short while later.

Had,

(i) the positive isolation of storage tank been carried out using blind plates at storage tank Inlet, and 8 plunger valve meant for purpose of controlling flow of hydrocarbon to manifold been kept closed, thus preventing entry of hydrocarbon gas from system into oil storage tank as required under the provisions of Regulation 98(5)(t) of the Oil Mines Regulations, 2017 read with Oil Industry Safety Directorate (OISD) STD 105;

(ii) hydrocarbons entrapped inside the storage tank been safely discharged before carrying out gas cutting operations on foam pipe lines and measurement of hydrocarbon gases to ensure absence of flammable gases inside the tank been ensured before commencing of job of cutting foam pipe line as required under the provisions of Regulation 98(4) & Regulation 98(5)(a) of the Oil Mines Regulations, 2017 read with Oil Industry Safety Directorate (OISD) STD 105 read with clause 14.2.1 of Standard Operating Procedure (SOP) document/Manual dated 24.12.2014;

(iii) the vapour seal been provided & kept maintained to prevent entry of hydrocarbon from storage tank to foam pourer line and also the foam pourer line been completely disconnected, positively isolated before carrying out its gas cutting operations as required under the provisions of Regulation 100(5)(a), Regulation 109(1) & Regulation 98(5)(f) of the Oil Mines Regulations, 2017 read with Oil Industry Safety Directorate (OISD) STD 105;

(iv) the vents, breather valve, pressure relief safety valve over the oil storage tank and gate valve to oil storage tank been examined, tested and kept maintained to ensure their safe working order as required under the provisions of Regulation 109(1) of the Oil Mines Regulations, 2017 read with 8.1.2 of Oil Industry Safety Directorate (OISD) STD 132;

(v) authorized welder been appointed for hot work and persons engaged in gas cutting operations in Zone 1 hazardous area been provided adequate training in safety and been made aware of risks associated with hot work by the person issuing the hot work permit before the commencement of job, thus negligently not endangering their life as required under provisions of Regulation 98(1)&(3) and Regulation 133 of Oil Mines Regulations, 2017 and

(vi) Proper supervision been exercised to ensure that hot work of gas cutting been carried out at hazardous area in safe manner by competent person as per laid down procedures as required under provisions of Regulation 33(1) & (3) of Oil Mines Regulations, 2017.

this accident could have been averted.

Code : 0776 Well Blowout (With Fire)
(2 Deaths)

27. Date - 09.06.20 Mine - WORK OVER MINE
Time - 13.15 Owner - OIL INDIA LTD.
Dist. - Tinsukia, State - Assam
Person(s) Killed :
1. T. Gohain, Fireman, Male, 54 Years
2. D. Gogoi, Fireman, Male, 36 Years

While four persons were working in the vicinity of well plinth area to drench the blowout for preparation to cap the well, suddenly the blowout caught fire and in the process of escaping from that area two persons were drowned in the water body existing near the pumps and died.

Had,

a well-defined on-site emergency plan was developed to deal with any fire clearly stating persons to escape from the site in case of fire, prohibited areas of entry, assembly point were displayed at strategic locations in the installation for understanding of the persons deployed there and the responsibilities of each person were clearly defined, explained and communicated to all concerned in writing and also given safety briefing at the beginning of the shift as required under clause no. 11.1.1, clause 11.1.3 and clause no. 11.1.9 of OISD STD 189 read with Regulations 31(1) (a) of the Oil mines Regulations, 2017,

this accident could have been averted.

Code : 0800 Falls (Other than Falls of Ground)

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

28. Date - 16.01.20 Mine - AGARIA MARBLE MINE (M.L. 36/09)
Time - 11.00 Owner - M/S CHANDRESH MAHESHWARI
Dist. - Rajsamand, State - Rajasthan
Person(s) Killed :
1. Shiv Singh, Mazdoor, Male, 49 Years

While a workman was pulling 1/2" diameter PVC pipe at the edge of marble bench in an opencast mine, he suddenly lost balance and fell on lower bench from a height of about 5.60m resulting into serious bodily injury to which he succumbed after 3 hours while being treated in hospital.

Had,

the workman not been permitted to work near the edge of bench, from where he was likely to slip over unless was secured by safety belt or life line, as required under the provisions of Regulation 114(2), Regulation 44(9) and Regulation 47(1) (b) of the Metalliferous Mines Regulations, 1961 read with section 18(4) of the Mines Act, 1952,

this accident could have been averted.

29. Date - 24.02.20 Mine - UKWA MANGANESE MINE
Time - 2.15 Owner - MANGANESE ORE [INDIA] LTD.
Dist. - Balaghat, State - Madhya Pradesh
Person(s) Killed :

1. D. Katre, Bellman, Male, 28 Years

While three persons were disentangling the power cable of a pump in an inset, for lowering it in the vertical sinking shaft, a person with his foot on the power cable was pulled due to sudden release of entangled power cable and fell into the shaft by damaging the fencing provided at the inset mouth, thus inflicting serious bodily injuries to him, to which he succumbed immediately, whereas a person at scaffold received serious bodily injuries.

Had,

the adequate mechanism been provided for lowering the power cable inside the shaft in a controlled manner, thus not negligently omitted to ensure the safety of persons engaged in pump and its power cable lowering, as required under the provisions of Regulation 181 of the MMR, 1961

the lowering of power cable been carried out by the skilled person under the supervision of competent person, thus not negligently omitted to ensure safety of persons employed. therein, as required under the provisions of Regulation 53(a) read with Regulation 1181 of the MMR 1961;

the person not engaged himself in pump lowering operation without instruction from his superior official, in the duties other than those for which he was authorised, thus negligently endangering his own life, as required under the provisions of Regulation 42 (c) read with Regulation 181 of the MMR, 1961 and

the official ensured that the persons carry out their respective duties in a proper manner, thus not negligently omitted to ensure safety of person under their charge, as required under the provisions of Regulation 41(1)(a), Regulation 43(2), Regulation 46(2)(a) read with Regulation 181 of the MMR, 1961.

this accident could have been averted.

30. Date - 08.03.20
Time - 8.00

Mine - PUS STONE QUARRY
Owner - M/S PUS STONE CRUSHERS
Dist. - Prakasham, State - Andhra Pradesh
Person(s) Killed :
1. S.J. Nag, Driller, Male, 45 Years

While a workman was shifting jack hammer drill along ledge of a stone bench of an opencast stone mine, for drilling the holes, he suddenly slipped and fell over a blasted muck pile from a height of about 40m inflicting serious bodily injuries to which he succumbed while being taken to hospital.

Had,

i) the qualified manager been appointed for over all management, control, supervision and direction of mining operations at the mine as required under Section 17(1) of the mines act, 1952 read with regulation 34(1) of the metalliferous Mines regulation 1961

ii) the statutory officials been appointed as required under Regulation 37 & 38 read with regulation 116 of the Metalliferous Mines Regulations, 1961

iii) the person been provided and secured with safety belt or life line and safe guarded while working at edge of bench having an inclination of more than 45 degrees from horizontal, where he is likely to slip or overbalance or is otherwise safeguarded while working at the edge of bench as required under Regulation 114(2) of the Metalliferous Mines regulations, 1961

iv) the person mine been worked by forming proper benches as per the permission granted under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961, vide letter no. HR2/SCZ/106(2)(b)/21(17)/2017/645-46 dated 09.02.2017.

v) the opencast mine been worked by forming proper benches as per the permission granted under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961, vide letter HR.2/SCZ/106(2)(b)/21(17)/2017/645-46 Dated 09.02.2017. No.

this accident could have been averted.

31. Date - 22.05.20 Mine - DALLI MECHANISED IRON ORE MINE
 Time - 8.00 Owner - M/S BHILAI STEEL PLANT
 Dist. - Durg, State - Chhattisgarh
 Person(s) Killed :
 1. Ati Ram, Contractual, Male, 41 Years

While a contractual worker was releasing 6.6v over head line conductors from a deformed electric rail pole at an approximate height of 10m from ground without any supervision, the rail pole got sheared off from the deformed point of rail pole and resulted in the fall of person along with the rail pole, leading to fatal injuries.

Had,

i) through examination of the deformed pole been done by an authorised electrical supervisor prior to engagement of the persons for working on the deformed electric pole so as to ensure the safety of the worker in accordance with Reg. 115(3)(i) read with Reg. 12(1) of CEA (Measures relating to safety and electric supply) Reg. 2010

ii) supervision of the work by a competent Electric Supervisor been ensured by the authorised Electrical Engineer incharge of the section in accordance with Reg. 115(2) of CEA (Measuring relating to safety and electric supply) Reg 2010 read with Reg 43(2) & 53(d) of the Metalliferous Mines Regulation, 1961

this accident could have been averted.

32. Date - 19.06.20 Mine - SELVARAJ STONE QUARRY
 Time - 15.30 Owner - P. SELVARAJU
 Dist. - Krishnagiri, State - Tamil Nadu
 Person(s) Killed :
 1. Amar, Driller, Male, 28 Years
 2. Pachiyappan, Helper, Male, 22 Years

While an unauthorized person was driving a tractor alongwith another person boarded on it, in a stone quarry, the driver lost control over the tractor at a sharp turning of haul road of narrow width and steep down gradient, and the tractor fell down to the bottom of the Quarry from a height of about 21m, inflicting serious bodily injuries to both, to which they succumbed on the spot.

Had,

i) a duly qualified manager was appointed at the mine for the overall management, control, supervision and direction, as required under the provisions of Regulation 34(1)(a),

ii) an engineer or other competent person was appointed to hold the general charge of machinery, and to be responsible for its installation, maintenance and safe working, as required under the provisions of Regulation 36(1)

iii) Mine Foreman and Mining mate were appointed in the mine to ensure that all work was done in accordance with the provisions of the Act and of the Regulations, Rules bye-laws and Orders framed thereunder, as required under the provisions of Reg 37(1)(a) and (116(1)

iv) the width of the haul roads was maintained three times the width of the dumper plying on it, as required under the provisions of Regulation 106(2)(b);

v) the gradient of the haul roads was not steeper than 1 in 16, curves were not sharp turns, and berms were maintained as required under the provisions of Reg 106(2) (b)

vi) top edges of the opencast workings and entrance of the mine were kept securely fenced to prevent the inadvertent entry of persons, as required the provisions of Reg 106(2) (b)

this accident could have been averted.

33. Date - 09.10.20 Mine - HUTTI GOLD MINE
Time - 13.30 Owner - HUTTI GOLD MINES CO. LTD.
Dist. - Raichur, State - Karnataka
Person(s) Killed :
1. Nagaraj, Worker, Male, 27 Years

While a person was removing the louvers on the super structure (shed) of old ball mill area in a gold mine, suddenly he lost his balance and fell on asbestos sheet which in turn broke and fell down from height of 8.84m on floor inflicting serious bodily injury which turned fatal on the next day during treatment at the hospital.

Had,

i) the Safe Operating Procedure (SOP) for persons working at heights been implemented and safety netting below the working height been provided thereby wilfully or negligently not endangering the life of person as required under Regulation 181 of the Metalliferous Mines Regulations, 1961 read with Recommendation No. 1.8.1 of the DGMS(Tech) Circular (MAMID)/05 dated 17.07.2013, DGMS(Tech) Circular (S&T)/05 dated 02.04.2016, DGMS (Tech) Circular no. 03 of 2019 dated 23.12.2019

ii) an official been appointed for through supervision of the operations as required under Regulation 39(1)(a) of the Metalliferous Mines Regulations, 1961,

iii) safety belt or lifeline been used by the person working at height as required under Regulation 114(2) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

34. Date - 05.11.20 Mine - SAVITA STONE MINE
Time - 14.00 Owner - PREMCHAND LAL MODI
Dist. - Koderma, State - Jharkhand
Person(s) Killed :
1. R. Prajapati, Driller, Male, 45 Years

While climbing up a haul road having gradient 1 in 5 in a stone quarry, the loaded tipper suddenly rolled back, a work-person crossing the haul road behind the rolling back truck tried to escape out in hurry and panic resulting into slipping from the edge of haul road and falling down to a depth of 4.5m on blasted stone boulders at bed of the quarry along with loose stone boulders from berm of haul road in which he sustained serious bodily injuries who succumbed on the way to surface of the mine.

Had,

i) the adequate quantity of drinking water been provided readily available at conveniently accessible points, near the work-place in the mine during the whole of the working shift as required under Rule 30(1) of the Mines Rules, 1955;

ii) the gradient of West side haul road of the mine been maintained at 1 in 16 as required under the condition no. No. 2.2.6 of the permission issued vide this Directorate letter no. 515731/CZ/Koderma Region/Perm/2020/5764, dated 18.08.2020 under Regulation 106(2) (b) of the Metalliferous Mines Regulations, 1961;

iii) the tippers deployed in the mine been thoroughly examined at least once in each shift and maintained in good and safe working condition as required under the condition no. No. 6.1.2 of the permission issued vide this Directorate's letter no. 515731/CZ/Koderma Region/perm/2020/5764, dated 18.08.2020 under Regulation 106(2) (b) of the Metalliferous Mines Regulations, 1961;

iv) the workings in the mine been placed under charge of a mining mate or other competent person as required under Regulation, 116(1) of the Metalliferous Mines Regulations, 1961;

v) the competent person been appointed in the mine for maintenance of tippers and keeping them in safe working order as required under Regulation 39(1) (a) (iii) of the Metalliferous Mines Regulations, 1961; and

vi) the truck driver and deceased person allowed to work in the mine been imparted a vocational training as required under Rule 6 of the Mine Vocational Training Rules, 1966;

this accident could have been averted.

35. Date - 10.11.20
Time - 10.00

Mine - KBC INFRASTRUCTURES STONE QUARRY
Owner - M/S KBC INFRASTRUCTURE PVT LTD
Dist. - Guntur, State - Andhra Pradesh
Person(s) Killed :
1. S.S. Dora, Driller, Male, 32 Years

While a workman has approached the top edge of the bench of an opencast mine, he suddenly slipped and fell over a blasted muck pile from a height of about 70.0m inflicting serious bodily injuries to which he succumbed after 1hr. 20 mins while being treated in hospital.

Had,

i) the dangerous place where the persons are likely to fall down from a height been kept fenced to prevent the workmen from fall from height, as required under Reg. 115(1) (a) of the Metalliferous Mines Regulation 1961 r.w condition no. 7.0 of Permission letter no. HR-2/DMS/106(2) (b)/45(16)/2016/1552, dt: 11.05.2016 granted under Reg. 106(2) (b) of the Metalliferous Mines Regulation 1961;

ii) the person been trained in GVTC before being employed in the mines as required under Rule-6(1) of the Mines Vocational Training Rules 1966

this accident could have been averted.

36. Date - 30.11.20
Time - 5.40

Mine - BOLANI IRON ORE MINE
Owner - RAW MATERIAL DIVISION (SAIL)
Dist. - Keonjhar, State - Orissa
Person(s) Killed :
1. Kali Das, Cont. Worker, Male, 42 Years

While a contractual workman was travelling down through a staircase in an ore handling plant of an opencast metalliferous mine, he overlooked the steps of the staircase and fell down from a height of about 1m inflicting serious bodily injuries to which he succumbed after one and half hours in the hospital.

Had,

the staircase not been travelled down negligently by the workman, thereby endangering his own life or limb in the mine as required under Regulation 181 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

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

37. Date - 13.05.20 Mine - BHONDAGAON JAGJIWANPUR SILICA SAND MINE
 Time - 13.30 Owner - M/S SUBHASH CHAND MUKESH
 Dist. - Bharatpur, State - Rajasthan
 Person(s) Killed :
 1. Guman Singh, Mazdoor, Male, 45 Years

While a toggle plate measuring about 3'X3'x80mm in size was being pulled up by a maintenance crew from hopper of a stone crusher unit located in an opencast Silica Sand Mine by an iron chain tied to it, the U clamp which was used as pulley broke and the toggle plate fell through a height of about 3 feet onto the head of a Mazdoor who was negligently crouching on the belt conveyor below to see the position of the plate, thus inflicting serious injury on his head to which he succumbed in the hospital.

Had,

i) it been ensured that no person was present underneath the toggle plate while it was being pulled up from hopper of a stone crusher, thus not negligently endangering life, as required by the provisions of Regulation 181 of the Metalliferous Mines Regulations, 1961, and

ii) it been ensured that U clamp used as pulley was of adequate strength to bear the weight of the toggle plate as required by Regulation 172 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

38. Date - 31.08.20 Mine - MEHSANA OIL PROJECT (DBG)
 Time - 9.00 Owner - OIL & NATURAL GAS CORPORATION LTD.
 Dist. - Mehasana, State - Gujarat
 Person(s) Killed :
 1. S.H.Myangar, Rigman, Male, 34 Years

While dismantling of drilling rig structure during rig down process in an oil mine, inadvertent removal of pins of brace arms of dog house structure by one of the rigman resulted in fall of dog house along with platform to the ground level from a height of about 4.3 meters. The falling structure hit the rigman working under it causing serious bodily injuries to which he succumbed short while later; and another rigman working at the edge of falling dog house structure lost his balance and fell down to the ground causing serious bodily injuries."

Had,

(i) Proper supervision been provided and exercise to ensure that rig structure dismantling activities been carried out in technically safe manner under the constant and close supervision of competent person so that no person shall negligently do anything likely to endanger life & safety of person & machinery employed in mine as required by the provisions of Regulation 21(1)(b) read with Regulation 2(g) and Regulation 33(1) of Oil Mines Regulations, 2017 read with clause 41 of DGMS(Tech.) Circular No.05 of 2020;

(ii) dog house been dismounted and its structure been secured prior to unpinning the brace arms, and accordingly code of practice for rig structure dismantling been framed, handed over & implemented to ensure that all such activities being carried out in technically safe & sequential manner thereby eliminating hazards due to bypassing the sequence, as required under provisions of Regulation 50(h) and Regulation 115(3)(a)&(4) of Oil Mines Regulation, 2017 read with clause 05 of DGMS(Tech.) Circular No.05 of 2020;

(iii) pins of brace arms of dog house structure were not loose fitted but of correct size, so as to prevent its removal without securing the structure, as required under provisions of Regulation 103(a) and Regulation 108 of Oil Mines Regulation, 2017

iv) persons transferred to new job been provided with adequate training in safety and been made aware of the risk associated with the job of structure dismantling at that specific rig before commencing the job, thus negligently not endangering their life as required under provisions of regulation 133 of oil mines regulations, 2017 read with clause 43 of DGMS (Tech.) Circular no. 05 of 2020

v) persons working at height been provided a safety belt with full body harness and ensured its use as required under provisions of Regulation 37 and regulation 126 of oil mines regulations 2017 read with clause 42 of DGMS (Tech) circular no. 05 of 2020

this accident could have been averted.

Code : 0900 Other Causes

Code : 0992 Flying Pieces (Except due to Explosives)
 (1 Death)

39. Date - 27.07.20 Mine - RAAGESHWARI OIL & GAS MINE
 Time - 16.10 Owner - M/S VEDANTA LTD CAIRN OIL & GAS
 Dist. - Barmer, State - Rajasthan
 Person(s) Killed :
 1. Raju Kumar, Cont. Employee, Male, 18 Years

While high pressure water was injected for hydro testing of pipeline of an oil and gas mine, the vent pipe with corroded and damaged internal thread fitted to blind flange at the end of the pipeline got dislodged and shot out, hitting a contractual worker standing on the pressure safety valve platform to observe Leakage inflicting serious bodily injury to which he succumbed on way to hospital.

Had,

1) all operations in the mine Been carried out in accordance with the code of practice and the part of the mine and the installation been examined before beginning work to rule out any dangerous defect as required by Regulation 28 of the OMR, 2017,

2) the place of work and equipment that has to be used was examined before beginning work and any dangerous defect discovered been forthwith reported as required by Regulation 26 of the Oil Mines Regulations, 2017 and

3) effective on going communication and coordination been established between appropriate levels of supervisors, officials and senior officials of the mine prior to commencing work including provision for identifying hazards and measures to eliminate and control risks as required by Regulation 25 of the Oil Mines regulations, 2017

this accident could have been averted.

Code : 0999 Unclassified
 (1 Death)

40. Date - 25.11.20 Mine - MSDL DRILLING MINE
 Time - 10.15 Owner - OIL & NATURAL GAS CORPORATION LTD.

Dist. - Krishna, State - Andhra Pradesh

Person(s) Killed :

1. Sandeep Kumar, Engineer, Male, 24 Years

While a drilling crew was performing running-in operation and lowering of 5" dia. drill pipe into mouse hole by air-winch simultaneously on derrick platform of a drilling mine, the lowering travelling block touched the top edge of the drill pipe, stumbled it (drill pipe) and hit one person who was guiding the drill pipe, causing serious bodily injuries to which he succumbed after three days while undergoing treatment at hospital.

Had,

the running-in operation and lowering of drill pipe into mouse-hole by means of air-winch been coordinated properly & the operations of lowering of drill pipe into mouse-hole been stopped while travelling block was being lowered and ensured that all persons employed in the drilling operations been made familiar with the code of practice framed for aforesaid operations, thus negligently or willfully not endangering the safety of persons employed in the derrick floor as required under Regulation 133 of the Oil Mines Regulations, 2017

this accident could have been averted.



2021

8. ACCIDENT ANALYSIS IN NON-COAL MINES: 2021

- The number of fatal accidents in non coal mines in the year 2021 stands at 33(Including 3 accident in Oil Mine) with 50 fatalities(Including 3 fatalities in Oil Mine) and 6 seriously injured (no serious injury in Oil Mine) 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 45 (including 10 serious accidents in Oil Mine) with 46 (including 10 serious injuries in Oil Mine) seriously injured persons in these serious accidents. 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 “Fall of Sides (other than overhangs)”. However, most number of serious accident occurred due to “Fall of objects incl. rolling objects”. Details can be seen in the statement 8.2.
- Maximum number of fatal accident occurred in Stone Mine. Maximum number of serious accident occurred is also in Iron Ore Mine. Details can be seen in the statement 8.1.
- Maximum number of fatal accident occurred in the mines in each of the zones i.e. North Western Zone and South Central Zone of this Directorate and maximum number of serious accident occurred in the mines under South Eastern Zone of this Directorate.
- Major Accident:
 - Date of Accident: 08 May 2021; Mine Name: C Kastauri Bai Barytes Mine; Mine Owner: C Kastauri Bai; Number of Persons Killed: 10; Number of Persons Seriously Injured: 0
 - Cause of the Accident: While eight persons were unloading explosives & detonators (quantity not known) from the dickey of a car which was being supervised by another person (unqualified supervisor), suddenly explosives detonated pre-maturely causing fatal injuries to all eight persons, the supervisor and the car driver (present at the site).
 - What could have averted this accident: Had,
 1. the explosive(s), issued from the magazine, been taken into the mine in a heavily galvanized case or container of substantial construction and securely locked and the detonators been carried in a separate container constructed of non-conductive material and the explosives & detonators been carried separately as required under Regulation 157(1) & 157(2) of Metalliferous Mines Regulations, 1961
 2. the duly qualified manager been appointed for overall management, control, supervision and direction of the mine as required under Section 17 of the Mines Act, 1952 read with Regulation 34(1) of the Metalliferous Mines Regulations, 1961,
 3. Asst. Manager, Mine Forman, Mining Mate & Blaster were appointed for supervision of the mining operations including blasting in the mine

as required under Regulation 35, 37, 39 & 116 of the Metalliferous Mines Regulations, 1961, and

4. the persons been imparted basic training and undergone a course of training of handling & use of explosive as detailed in the 6th schedule as required under Rule 6 and 13(1) of the Mines Vocational Training Rule, 1966, This accident could have been averted.
- Recommendations: Recommended suitable strong action may be taken against the persons held responsible for the accident.

STATEMENT 8.1

Accidents and placewise casualties in non-coal mines by state-district wise in 2021

| 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. | Oil | | | | | | | | | | | | | | |
| | Andhra Pradesh | | | | | | | | | | | | | | |
| | East Godavari | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | TOTAL : ANDHRA PRADESH | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | Assam | | | | | | | | | | | | | | |
| | Dibrugarh | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sibsagar | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL : ASSAM | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Gujarat | | | | | | | | | | | | | | |
| | Ahmedabad | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | Bharuch | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Gandhinagar | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | TOTAL : GUJARAT | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 2 |
| | Madhya Pradesh | | | | | | | | | | | | | | |
| | Shahdol | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | TOTAL : MADHYA PRADESH | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |

| | | | | | | | | | | | | | | | |
|--|---|----|---|---|---|----|---|----|---|---|---|----|---|----|--|
| Rajasthan | | | | | | | | | | | | | | | |
| Barmer | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | |
| Jaisalmer | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | |
| TOTAL : RAJASTHAN | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | |
| ALL INDIA : OIL | 3 | 10 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 10 | 0 | 10 | |
| 2. Barytes | | | | | | | | | | | | | | | |
| Andhra Pradesh | | | | | | | | | | | | | | | |
| Kadapa | 1 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | |
| TOTAL : ANDHRA PRADESH | 1 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | |
| ALL INDIA : BARYTES | 1 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3. China Clay, Clay, White-clay | | | | | | | | | | | | | | | |
| Gujarat | | | | | | | | | | | | | | | |
| Kutch | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | |
| TOTAL : GUJARAT | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | |
| ALL INDIA : CHINA CLAY, CLAY, WHITE-CLAY | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4. Chromite | | | | | | | | | | | | | | | |
| Orissa | | | | | | | | | | | | | | | |
| Jajpur | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 2 | |
| TOTAL : ORISSA | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 2 | |
| ALL INDIA : CHROMITE | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 2 | |
| 5. Galena & Sphalarite | | | | | | | | | | | | | | | |
| Rajasthan | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bhilwara | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 1 | 0 | 3 |
| Udaipur | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 1 | 0 | 4 |
| Rajsamand | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| TOTAL : RAJASTHAN | 2 | 8 | 3 | 0 | 0 | 0 | 0 | 3 | 5 | 1 | 0 | 2 | 0 | 8 |
| ALL INDIA : GALENA & SPHALARITE | 2 | 8 | 3 | 0 | 0 | 0 | 0 | 3 | 5 | 1 | 0 | 2 | 0 | 8 |
| 6. Gold | | | | | | | | | | | | | | |
| Karnataka | | | | | | | | | | | | | | |
| Raichur | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 5 |
| TOTAL : KARNATAKA | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 5 |
| ALL INDIA : GOLD | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 5 |
| 7. Granite | | | | | | | | | | | | | | |
| Andhra Pradesh | | | | | | | | | | | | | | |
| Prakasham | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : ANDHRA PRADESH | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Telangana | | | | | | | | | | | | | | |
| Adilabad | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : TELANGANA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : GRANITE | 3 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8. Iron | | | | | | | | | | | | | | |
| Chhattisgarh | | | | | | | | | | | | | | |
| Durg | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : CHHATTISGARH | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jharkhand | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|------------------------|---|----|---|---|---|---|---|---|---|---|---|---|---|----|
| West Singbhum | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 |
| TOTAL : JHARKHAND | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 |
| Karnataka | | | | | | | | | | | | | | |
| Bellary | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 1 |
| Chitradurga | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : KARNATAKA | 2 | 1 | 0 | 2 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 1 |
| Orissa | | | | | | | | | | | | | | |
| Keonjhar | 2 | 7 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 6 | 0 | 7 |
| TOTAL : ORISSA | 2 | 7 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 6 | 0 | 7 |
| ALL INDIA : IRON | 5 | 11 | 0 | 2 | 0 | 4 | 0 | 6 | 0 | 2 | 0 | 9 | 0 | 11 |
| 9. Limestone | | | | | | | | | | | | | | |
| Chhattisgarh | | | | | | | | | | | | | | |
| Balodabazar-Bhatapara | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| TOTAL : CHHATTISGARH | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| Karnataka | | | | | | | | | | | | | | |
| Gulbarga | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : KARNATAKA | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Madhya Pradesh | | | | | | | | | | | | | | |
| Jabalpur | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Satna | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| TOTAL : MADHYA PRADESH | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 2 |
| Rajasthan | | | | | | | | | | | | | | |
| Chittorgarh | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| Kota | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TOTAL : RAJASTHAN | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 2 |
| ALL INDIA : LIMESTONE | 3 | 5 | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 1 | 0 | 5 | 0 | 6 |
| 10. Manganese | | | | | | | | | | | | | | |
| Madhya Pradesh | | | | | | | | | | | | | | |
| Balaghat | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| TOTAL : MADHYA PRADESH | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| ALL INDIA : MANGANESE | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 11. Marble | | | | | | | | | | | | | | |
| Rajasthan | | | | | | | | | | | | | | |
| Udaipur | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : RAJASTHAN | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : MARBLE | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12. Sillimanite | | | | | | | | | | | | | | |
| Orissa | | | | | | | | | | | | | | |
| Ganjam | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| TOTAL : ORISSA | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| ALL INDIA : SILLIMANITE | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| 13. Steatite | | | | | | | | | | | | | | |
| Rajasthan | | | | | | | | | | | | | | |
| Udaipur | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : RAJASTHAN | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |

| | | | | | | | | | | | | | | |
|------------------------|---|---|---|----|---|---|---|----|---|---|---|---|---|---|
| ALL INDIA : STEATITE | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| 14. Stone | | | | | | | | | | | | | | |
| Andhra Pradesh | | | | | | | | | | | | | | |
| Guntur | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : ANDHRA PRADESH | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jharkhand | | | | | | | | | | | | | | |
| Koderma | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : JHARKHAND | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rajasthan | | | | | | | | | | | | | | |
| Bhilwara | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : RAJASTHAN | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 1 |
| Tamil Nadu | | | | | | | | | | | | | | |
| Kancheepuram | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 1 |
| Villupuram | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Krishnagiri | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : TAMIL NADU | 3 | 0 | 0 | 3 | 1 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 1 |
| Uttar Pradesh | | | | | | | | | | | | | | |
| Sonbhadra | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| Mahoba | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : UTTAR PRADESH | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 |
| ALL INDIA : STONE | 8 | 0 | 0 | 11 | 1 | 0 | 0 | 12 | 0 | 4 | 0 | 0 | 0 | 4 |
| 15. Atomic Mineral | | | | | | | | | | | | | | |
| Andhra Pradesh | | | | | | | | | | | | | | |
| Kadapa | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 2 |
| TOTAL : ANDHRA PRADESH | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 2 |

| | | | | | | | | | | | | | | |
|-----------------------------------|----|----|---|----|---|----|---|----|----|----|---|----|---|----|
| Jharkhand | | | | | | | | | | | | | | |
| Saraikhela Kharsawan | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : JHARKHAND | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : ATOMIC MINERAL | 2 | 2 | 1 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 2 |
| ALL INDIA : ALL NON-COAL MINERALS | 33 | 45 | 5 | 23 | 1 | 21 | 0 | 50 | 11 | 11 | 0 | 30 | 0 | 52 |

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

Number of accidents and casualties/seriously injured persons in non-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 | | 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 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| China Clay, Clay, White-clay | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| Iron | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| Manganese | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| Steatite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 4 | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 8 | 3 | 0 | 0 |
| TOTAL : FALL OF SIDES (OTHER THAN OVERHANGS) | 1 | 1 | 0 | 1 | 1 | 8 | 15 | 4 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 10 | 17 | 4 | 1 | 1 |
| Galena & Sphalarite | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| TOTAL : FALL OF OVERHANGS | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| TOTAL : GROUND MOVEMENT | 2 | 3 | 0 | 1 | 1 | 8 | 15 | 4 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 11 | 19 | 4 | 1 | 1 |
| Sillimanite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : HIT BY CAGES, SKIP ETC. | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Gold | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : OTHER RAIL TRANSPORTATION | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : CONVEYORS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| Galena & Sphalarite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|----|---|---|---|---|----|---|---|---|
| TOTAL : DUMPERS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : WAGON MOVEMENTS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Gold | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : WHEELED TRACKLESS (TRUCK, TANKER, ETC.) | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 2 | 2 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| TOTAL : TRANSPORTATION MACHINERY (NON-WINDING) | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 1 | 1 | 3 | 3 | 0 | 2 | 2 | 4 | 4 | 0 | 5 | 5 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Gold | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : DRILLING MACHINES | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Gold | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Atomic Mineral | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : LOADING MACHINES | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 2 | 1 | 1 | 0 | 2 | 2 |
| Chromite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : CRUSHING & SCREENING PLANTS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | 1 | 1 | 3 | 3 | 1 | 1 | 1 |
| Galena & Sphalarite | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Sillimanite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : OTHER NON-TRANSPORTATION MACHINERY | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| TOTAL : MACHINERY OTHER THAN TRANSP. MACHINERY | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 2 | 2 | 4 | 4 | 1 | 3 | 3 | 4 | 4 | 1 | 8 | 8 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| Galena & Sphalarite | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : SOLID BLASTING PROJECTILES | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : DEEP HOLE BLASTING PROJECTILES | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Barytes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 10 | 0 | 0 | 0 | 1 | 10 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| TOTAL : OTHER EXPLOSIVE ACCIDENTS | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 10 | 0 | 0 | 0 | 2 | 11 | 1 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | | | | | | | |
| TOTAL : EXPLOSIVES | 1 | 1 | 0 | 0 | 0 | 3 | 3 | 1 | 0 | 0 | 1 | 10 | 0 | 0 | 0 | 5 | 14 | 1 | 0 | 0 |

| | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : OTHER ELECTRICAL ACCIDENTS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Marble | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| TOTAL : FALL OF PERSON FROM HEIGHT/INTO DEPTH | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 5 | 5 | 0 | 1 | 1 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Atomic Mineral | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : FALL OF PERSONS ON THE SAME LEVEL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 4 | 4 |
| Galena & Sphalarite | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 2 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : FALL OF OBJECTS INCL. ROLLING OBJECTS | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 5 | 5 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Galena & Sphalarite | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : 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 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| Gold | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : FLYING PIECES (EXCEPT DUE TO EXPLOSIVES) | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 2 | 2 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : DROWNING IN WATER | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Atomic Mineral | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : BURSTING/LEAKAGE OF OIL PIPE LINES | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 6 | 6 |
| Chromite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Galena & Sphalarite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 2 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 3 | 3 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 0 | 0 | 0 | 3 | 4 |

| | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|----|----|----|----|---|---|---|----|----|---|----|----|----|----|---|----|----|
| Atomic Mineral | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : UNCLASSIFIED | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 13 | 14 | 0 | 0 | 0 | 16 | 18 |
| ----- | | | | | | | | | | | | | | | | | | | | |
| TOTAL : OTHER CAUSES | 1 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 14 | 15 | 3 | 3 | 0 | 18 | 19 |
| ----- | | | | | | | | | | | | | | | | | | | | |
| ALL INDIA : ALL NON-COAL MINERALS | 4 | 5 | 0 | 11 | 11 | 17 | 24 | 5 | 6 | 6 | 12 | 21 | 1 | 28 | 29 | 33 | 50 | 6 | 45 | 46 |
| ----- | | | | | | | | | | | | | | | | | | | | |

STATEMENT 8.3

Fatal accidents and casualties in non-coal mines by broad cause in 2021

| Cause/Mineral | Oil | Copper | Galena | Gold | Iron | Lime- Stone | Mang- anese | Stone | Others | TOTAL |
|--------------------|-----|--------|--------|------|------|----------------|----------------|-------|--------|-------|
| Fall of Sides | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 4 | 3 | 11 |
| Killed-S/Injured : | 1-0 | 0-0 | 2-0 | 0-0 | 2-0 | 0-0 | 1-0 | 8-3 | 5-1 | 19-4 |
| Dumpers | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 1-0 | 0-0 | 0-0 | 0-0 | 0-0 | 1-0 |
| Trucks | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 1-0 | 0-0 | 0-0 | 0-0 | 1-0 |
| Other Machinery | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 2 | 6 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 2-0 | 2-0 | 0-0 | 0-0 | 2-1 | 6-1 |
| Explosives | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 5 |
| Killed-S/Injured : | 0-0 | 0-0 | 1-0 | 0-0 | 0-0 | 0-0 | 0-0 | 2-1 | 11-0 | 14-1 |
| Fall of Persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 5 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 2-0 | 3-0 | 5-0 |
| Fall of Objects | 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 |
| Other causes | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 4 |
| Killed-S/Injured : | 2-0 | 0-0 | 0-0 | 0-0 | 1-0 | 0-0 | 0-0 | 0-0 | 1-0 | 4-0 |
| Belowground | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 4 |
| Killed-S/Injured : | 0-0 | 0-0 | 3-0 | 0-0 | 0-0 | 0-0 | 1-0 | 0-0 | 1-0 | 5-0 |

| | | | | | | | | | | |
|--------------------|-----|-----|-----|-----|-----|-----|-----|------|------|------|
| Opencast | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 8 | 7 | 17 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 2-0 | 1-0 | 0-0 | 12-4 | 9-1 | 24-5 |
| Aboveground | 3 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 3 | 12 |
| Killed-S/Injured : | 3-0 | 0-0 | 0-0 | 0-0 | 4-0 | 2-0 | 0-0 | 0-0 | 12-1 | 21-1 |
| ----- | | | | | | | | | | |
| TOTAL | 3 | 0 | 2 | 0 | 5 | 3 | 1 | 8 | 11 | 33 |
| Killed-S/Injured : | 3-0 | 0-0 | 3-0 | 0-0 | 6-0 | 3-0 | 1-0 | 12-4 | 22-2 | 50-6 |
| ----- | | | | | | | | | | |

STATEMENT 8.4**Serious accidents and seriously injured persons in non-coal mines by broad causes in 2021**

| Cause/Mineral | Oil | Copper | Galena | Gold | Iron | Lime- Stone | Mang- anese | Stone | Others | TOTAL |
|--------------------------------|--------|--------|--------|--------|--------|----------------|----------------|--------|--------|----------|
| Fall of Sides S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 1 1 | 0 0 | 0 0 | 1 1 |
| Dumpers S/Injured : | 0 0 | 0 0 | 1 1 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 1 1 |
| Trucks S/Injured : | 0 0 | 0 0 | 0 0 | 1 1 | 1 1 | 0 0 | 0 0 | 0 0 | 0 0 | 2 2 |
| Other Machinery S/Injured : | 1 1 | 0 0 | 2 2 | 3 3 | 3 3 | 0 0 | 0 0 | 0 0 | 2 2 | 11 11 |
| Explosives S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Fall of Persons S/Injured : | 1 1 | 0 0 | 0 0 | 0 0 | 2 2 | 1 1 | 0 0 | 0 0 | 1 1 | 5 5 |
| Fall of Objects S/Injured : | 0 0 | 0 0 | 2 2 | 0 0 | 2 2 | 1 1 | 0 0 | 0 0 | 0 0 | 5 5 |
| Other causes S/Injured : | 8 8 | 0 0 | 3 3 | 1 1 | 3 3 | 3 4 | 0 0 | 0 0 | 2 2 | 20 21 |
| Belowground S/Injured : | 0 0 | 0 0 | 5 5 | 4 4 | 0 0 | 0 0 | 1 1 | 0 0 | 1 1 | 11 11 |

| | | | | | | | | | | |
|-------------|----|---|---|---|----|---|---|---|---|----|
| Opencast | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 0 | 2 | 6 |
| S/Injured : | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 0 | 2 | 6 |
| Aboveground | 10 | 0 | 2 | 1 | 9 | 4 | 0 | 0 | 2 | 28 |
| S/Injured : | 10 | 0 | 2 | 1 | 9 | 5 | 0 | 0 | 2 | 29 |
| ----- | | | | | | | | | | |
| TOTAL | 10 | 0 | 8 | 5 | 11 | 5 | 1 | 0 | 5 | 45 |
| S/Injured : | 10 | 0 | 8 | 5 | 11 | 6 | 1 | 0 | 5 | 46 |
| ----- | | | | | | | | | | |

STATEMENT 8.5**Regionwise/zonewise accidents in non-coal mines in 2021**

| Region/Zone | Fatal Accidents | | | Serious Accidents | |
|--------------------|------------------|------------|-----------|-------------------|-----------|
| | No. of Accidents | Fatalities | S/Injured | No. of Accidents | S/Injured |
| Koderma | 1 | 2 | 0 | 0 | 0 |
| Central Zone | 1 | 2 | 0 | 0 | 0 |
| Guwahati | 2 | 2 | 0 | 0 | 0 |
| Eastern Zone | 2 | 2 | 0 | 0 | 0 |
| Ahmedabad | 1 | 2 | 0 | 2 | 2 |
| Surat | 1 | 1 | 0 | 0 | 0 |
| Udaipur | 4 | 4 | 1 | 6 | 7 |
| North-Western Zone | 6 | 7 | 1 | 8 | 9 |
| Ajmer | 2 | 5 | 1 | 9 | 9 |
| Gwalior | 2 | 2 | 1 | 0 | 0 |
| Varanasi | 1 | 1 | 1 | 0 | 0 |
| Northern Zone | 5 | 8 | 3 | 9 | 9 |
| Hyderabad I | 1 | 2 | 0 | 1 | 1 |
| Hyderabad II | 5 | 14 | 0 | 2 | 2 |
| South-Central Zone | 6 | 16 | 0 | 3 | 3 |
| Bhubaneswar | 1 | 1 | 1 | 3 | 3 |
| Chaibasa | 3 | 3 | 0 | 10 | 10 |
| South-Eastern Zone | 4 | 4 | 1 | 13 | 13 |
| Bangluru | 2 | 2 | 0 | 0 | 0 |
| Bellary | 1 | 2 | 0 | 7 | 7 |
| Chennai | 2 | 3 | 1 | 0 | 0 |
| Southern Zone | 5 | 7 | 1 | 7 | 7 |
| Bilaspur | 2 | 2 | 0 | 1 | 1 |
| Jabalpur | 1 | 1 | 0 | 3 | 3 |
| Nagpur I | 1 | 1 | 0 | 1 | 1 |
| Western Zone | 4 | 4 | 0 | 5 | 5 |
| ALL INDIA | 33 | 50 | 6 | 45 | 46 |

STATEMENT 8.6**Fatal accidents in non-coal mines by cause and responsibility in 2021**

| Responsibility / Major Cause Group | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Total |
|------------------------------------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Management | 7 | 0 | 0 | 2 | 3 | 0 | 0 | 5 | 1 | 18 |
| Management & Sub. Sup. Staff (SSS) | 4 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 8 |
| Management, SSS & Deceased | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 |
| Management & Deceased | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| Sub.Sup.Staff & Others | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Deceased | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Others | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 11 | 0 | 4 | 4 | 5 | 1 | 0 | 5 | 3 | 33 |

STATEMENT 8.7**Summary of Findings of Fatal Accidents in Non-Coal mines during the year 2021**

 Code : 0100 Ground Movement

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

1. Date - 08.01.21 Mine - PAHRA STONE MINE
 Time - 15.30 Owner - SHRI JAYANT SINGH
 Dist. - Mahoba, State - Uttar Pradesh
 Person(s) Killed :
 1. Chunnu Lal, Driller, Male, 30 Years

While two drillers were drilling holes in stone boulders at the toe of a 10m high stone bench having fractured & fragmented upper part overlain with stone boulders on its side slope at a stone quarry, spalling of side from upper part resulted in rolling down of several stone boulders causing severe head injury to one of the driller to which he succumbed on spot and inflicted serious bodily injuries to another driller.

Had,

(i) the height of stone bench been restricted to six (06) meter with removal of fractured & fragmented upper part and overlying stone boulders on side slope of such high stone bench to make it secure as required under Regulation 106 (3) of the Metalliferous Mines Regulations, 1961 read with Condition No.9(ii) of the permission letter No. 518877/ NZ/ Gwalior Region/ Perm106(2)(b) with deep hole/ MMR, 1961/2020/6171 dated 27.08.2020.

(ii) it been ensured that no person was engaged for drilling of holes in stone boulders at the toe of a high bench having fractured & fragmented upper part overlain with stone boulders on side slope of such high stone bench thus not negligently omitted to ensure safety of the persons employed in the mine as required under Regulation 181 read with Regulation 47(5)(a) of the Metalliferous Mines Regulations, 1961.

(iii) the danger of spall of side of high stone bench & subsequent rolling down of overlying stone boulders been apprehended and prompt attention been paid to remove such danger with inspection and supervision thus not negligently omitted to provide safety of persons employed in the mine as required under Regulation 181 read with Regulation 46(7) of the Metalliferous Mines Regulations, 1961.

this accident could have been averted.

2. Date - 04.02.21 Mine - D. SARATH KUMAR ROUGH STONE QUARRY
 Time - 9.00 Owner - D. SARATH KUMAR
 Dist. - Kanchipuram, State - Tamil Nadu
 Person(s) Killed :
 1. B. Manikandan, Driller, Male, 22 Years
 2. S. Ansari, Helper, Male, 23 Years

While four persons were maintaining machineries at the bottom of high bench, about 35m in height, in an opencast stone mine, a portion of side of the bench, measuring about 7.5m (L) x 7.0m (H) x 1.5-3.0m (T), parted broken into pieces and fell down from a height of about 35m, hitting three of them, in which one person died on the spot, other succumbed to his injuries in the hospital after about 15 hours and the third person became seriously injured while fourth escaped narrowly.

Had,

a duly qualified manager been appointed for overall management, control, supervision and direction of the mine as required under section 17 of the mines act, 1952 read with regulation 34 of the metalliferous mines regulations, 1961

the sides of the opencast workings been adequately benched, sloped or secured so as to prevent danger from fall of sides before employing persons at the bottom of the bench as required under regulation 106(3) of the metalliferous mines regulations 1961, and

a mining mate been appointed and mine workings been placed under his charge for supervision as required under regulation 39 read with regulation 116 of the metalliferous mines regulations, 1961

this accident could have been averted.

3. Date - 09.03.21
Time - 12.40

Mine - UDAIPURIA/BHAGWANPURA SANDSTONE MINE

Owner - M/S GANESH STONE

Dist. - Bhilwara, State - Rajasthan

Person(s) Killed :

1. R. Meena, Dumpert Optr., Male, 25 Years
2. S.L. Gurjar, Dumper Optr., Male, 28 Years
3. S. Meena, Helper, Male, 30 Years

While four contractor workers deployed in an Opencast sandstone mine were taking shelter after lunch by sitting on a tractor parked beside high wall of the bench of about 14m height a rock mass measuring about 10m (L) x 10m (W) x 5m (T) suddenly fell down from the high wall side at a height of about 10m and buried tractor including four persons underneath the stone debris causing fatal injuries to three person on the spot and serious bodily injury to one person.

Had,

i) the persons not been engaged at the toe of high bench of about 14m height having overhang thus not endangering the life of the persons employed in the mine, as required under the provisions of Regulation 181 of the Metalliferous Mines Regulations, 1961

ii) the side of an excavation been adequately benched, sloped or secured so as to prevent danger of fall of the sides as required under the provisions of Regulation 106(3) of the Metalliferous Mines Regulations, 1961

iii) the side of an excavation not been undercut causing overhanging as required under the provisions of Regulation 106(5) of the Metalliferous Mines Regulations, 1961 and

iv) a duly qualified Manager, mine foreman and mining mate been appointed in the mine for overall management, control, direction and supervision of the mine as

required under the provisions of Regulation 34(1(a) & 116 of the Metalliferous Mines Regulations, 1961

all read with section 17(1), 18(1) & (4) of the Mines Act, 1952

this accident could have been averted.

| | | |
|----|---------------------------------|--|
| 4. | Date - 17.03.21 Time - 10.30 | Mine - JAMDIHA STONE MINE Owner - ASHOK KUMAR GUPTA Dist. - Koderma, State - Jharkhand Person(s) Killed : 1. Naresh Singh, Driller, Male, 30 Years 2. Bachhu Singh, Driller, Male, 29 Years |
|----|---------------------------------|--|

While two work persons were engaged for drilling shot holes on a stone ledge at bottom of the pit within 8m from high wall of stone bench about 40-45m high towards northern side in an opencast stone mine, suddenly a mass of stone measuring about 2.4m(L) x 0.8m (W) x 0.8m (T) parted from the side of high wall and fell down from height of 4-5m inflicting injuries to both of them, which proved fatal to one of them instantaneously and serious bodily injuries to other to which he succumbed three days later in the hospital.

Had,

i) the workers were not been deployed at bottom of the quarry within 8m from the northern side high bench for extraction of stolen in contravention of the order under section 22(3) of the mines act, 1952 issued vide this Directorate's letter no. KR/1139, dated 01.04.2016;

ii) the sides in the mine been kept adequately benched, sloped or secured so as to prevent danger form fall of sides as required under Regulation 106(3) of the Metalliferous Mines Regulation, 1961; and

iii) the work-person deployed in the mine been imparted a vocational training as required under Rule 6 of the Mine Vocational Training Rules, 1961;

this accident could have been averted.

| | | |
|----|---------------------------------|---|
| 5. | Date - 05.05.21 Time - 11.00 | Mine - MAMUARA WHITE CLAY MINE Owner - M/S DEV KRUPA Dist. - Kutch, State - Gujarat Person(s) Killed : 1. D.R.Danger,Contract worker, Male, 50 Years 2. P.K.Luhar,Contract worker, Male, 28 Years |
|----|---------------------------------|---|

While a tipper driver along with helper was reversing tipper for taking load in a white day opencast mine, the tipper collided with adjacent 40m high wall of clay and silica to which highwall started sliding and in apprehension of burying they jumped out from the cabin and rushed to save themselves, meanwhile a mass of about 35000 cubic meter of clay and silica slid over them, their tipper and two nearby tippers, which resulted intantaneous death to the helper, serious bodily injuries to the driver who scumbed soon after on way to hospital and to other drivers escaped narrowly.

Had,

(i) the side of the mine been adequately benched, sloped and kept secured so as to prevent the danger from fall of side, as required under the provisions of the Regulation 106(3) of the Metalliferous Mines Regulations, 1961;

(ii) working of the mine in pit no.1 not been extended up to 3-4m of the mine boundary as required under the provisions of the Regulation 111(3) of the Metalliferous Mines Regulations, 1961;

(iii) the persons working in the mine been placed under the charge of Mining Mate or any other competent persons as required under the provisions of the Regulation 37 & Regulation 116(1) of the Metalliferous Mines Regulations, 1961;

(iv) a person possessing at least Foreman's certificate been authorised to act as a manager of the mine during absence/leave of regular manager as required under the provisions of the Regulation 34(7) (a) of the metalliferous Mines Regulations, 1961 and

(v) mine workings been kept suspended during absence/leave of regular manager as required under the provisions of the Regulations 34(6) read with condition No.10 of permission issued vide letter No.361221/NWZ/Ahmedabad Region/Perm.2020/5605 dated 10.08.2020 read with section 18(4) of the Mines Act, 1952.

this accident could have been averted.

6. Date - 15.09.21
Time - 17.45

Mine - HARAGINADONI IRON ORE MINE
Owner - SHRI ALLUM PRASHANTH
Dist. - Bellary, State - Karnataka
Person(s) Killed :

1. Nagendra Yadav, Operator, Male, 44 Years
2. Mukesh Kumar, Helper, Male, 23 Years

While an excavator operator and his helper were conducting regular check-up of the excavator, placed near the side of the bench, suddenly a huge rock mass measuring about 35m(length) x 4m (width) x 14.6m (Height), parted and fell over them and excavator, inflicting fatal injury to both of them.

Had,

the opencast workings been kept adequately benched, sloped and secured as required under provisions of Regulation 106(2)(b) read with condition No.2.1.1. of the permission granted vide this Directorate's letter No.BLR-BL/IO-85/P-106/2018/1174, dated 16.03.2018,

this accident could have been averted.

7. Date - 26.11.21
Time - 10.30

Mine - BALAGHAT MANGANESE MINE
Owner - MANGANESE ORE [INDIA] LTD.
Dist. - Balaghat, State - Madhya Pradesh
Person(s) Killed :

1. Chaitram Lilhare, Contractual Emp., Male,

33 Years

While a workman was mucking blasted rock from the floor at the construction site of side support wall in development heading of a below ground mine, suddenly a rock mass measuring about 0.8m X 0.7m and 0.3m in thickness fell from side from a height of 2.6m inflicting serious injuries to which he succumbed while on the way to hospital.

Had,

the side been made and kept secured by ensuring proper dressing of the overhang in accordance with the clause 1 of the Regulation 112 of the Metalliferous Mines Regulations 1961

this accident could have been averted.

| | | |
|----|--------------------------------|--|
| 8. | Date - 26.11.21 Time - 9.00 | Mine - KARCHA SOAPSTONE MINE (ML 14/1995) Owner - M/S ASSOCIATED MINERALS Dist. - Udaipur, State - Rajasthan Person(s) Killed : 1. Hakra, Worker, Male, 52 Years |
|----|--------------------------------|--|

While two workers were manually extracting soapstone ore from the blasted material near the toe of the bottommost bench in an opencast mine, suddenly, about 04 tonne of loose strata dislodged from the side of the bench and fell from a height of 4m, burying one of them causing suffocation to which he succumbed almost on the spot while other escaped with minor injuries.

Had,

the sides of an excavation been kept adequately benched, sloped and secured so as to prevent danger from fall of sides as required under Regulation 106(2)(b) and 106(3) of the Metalliferous Mines Regulations, 1961 and Section 18(1) & 18(4) of the Mines Act, 1952, read with condition No. 22(4) of the permission granted vide letter No. 4856, dated. 29.12.2008,

the mine been placed under the charge of a duly qualified manager for the overall management, control, supervision and direction as required under the provisions of Section 17(1) of the Mines Act, 1952, read with Regulation 34(1)(a) of the Metalliferous Mines Regulations, 1961 and

the extraction of Soapstone ore from blasted material been carried out under the thorough supervision of Mining mate as required under the provision of Regulation 39(1)(a) read with Regulation 116 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

| | | |
|----|---------------------------------|---|
| 9. | Date - 06.12.21 Time - 13.30 | Mine - GELEKI DRILLING OIL MINE Owner - OIL & NATURAL GAS CORPORATION LTD. Dist. - Sibsagar, State - Assam Person(s) Killed : 1. Dinen Konwar, Installation Manager, Male, 58 Years |
|----|---------------------------------|---|

While an official of a departmental Drilling Mine installation was at work along with one of the crew members, all of a sudden the traveling block came down heavily and before he could get control over its speed, the traveling block hit the

driller's shed and then the rig floor whereby he received fatal bodily injuries and the fellow crew member escaped narrowly unhurt.

had,

(i) Care been taken to rectify the defect in the low clutch of the hoisting equipment of the Drilling Rig which was dis-engaged abruptly during hoisting of drill string due to relief of compressed air on increase of weight as required under Regulation 108 read with Regulation 133 of OMR 2017.

(ii) The operation been suspended in the drilling installation till the rectification of the defects in the low clutch of the hoisting equipment as required under Regulation 108 of OMR 2017.

10. Date - 17.12.21
Time - 20.45

Mine - A.P.GRANITE (MIDWEST) GRANITE MINE
Owner - A.P.GRANITE (MIDWEST) PVT. LTD.
Dist. - Prakasham, State - Andhra Pradesh
Person(s) Killed :

1. Muna Swain, Wire Saw Operator, Male, 22

Years

2. Pabitra Bishoyi, Wire Saw Helper, Male, 19

Years

While one wire saw operator and his helper were lowering nylon rope through a vertically drilled hole made on the top of a bench of an opencast granite mine, part of the bench measuring about 10m (length) x 6m (width) slid burying them under the debris to which the wire saw operator and his helper succumbed on the spot.

Had,

i) Height of the bench in the mine been made not more than 8m as required under the Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961 read with Condition no. 5.1 of Annexure-106A the permission issued vide this Directorate's letter no. HR-2/SCZ/106(2)(b)/131(17)/2017/1847, dated 08.06.2017 and letter no. HR-2/SCZ/Corrigendum/2017/2298, dated 11.07.2017; and

ii) suitable devices to indicate the rock pressure been used during working at geologically disturbed area to warn the persons against the impending movement of in-situ rock mass as required under the Regulation 106(2)(b) of the metalliferous Mines Regulations, 1961 read with condition no. 5.2 of Annexure-106A of the permission issued vide this Directorate's letter no. HR-2/SCZ/106(2)(b)/131(17)/2017/1847, dated 08.06.2017 and letter no. HR-2/SCZ/Corrigendum/2017/2298/, dated 11.07.2017.

this accident could have been averted.

Code : 0113 Fall of Overhangs
(2 Deaths)

11. Date - 28.06.21
Time - 17.15

Mine - RAMPURA AGUCHA LEAD & ZINC UG MINE
Owner - HINDUSTAN ZINC LTD.
Dist. - Bhilwara, State - Rajasthan
Person(s) Killed :

- Male, 28 Years
1. Kham Bahadur Shah, Contractor Worker,
 2. Jeetmal Jat, Contractor Worker, Male, 27 Years

While four contractor workers of a crew were charging shot holes in upper portion of a development face 6.5m high and 5.6m wide by standing inside the basket attached to Volvo machine at Lead and Zinc Underground Mine, a mass of rock measuring about 1.2 m long X 0.9m wide X 0.3m thick separated from the face and fell from a height of about 3m over other two workers of the crew charging shot holes in bottom portion inflicting them serious bodily injuries to which one of the worker died on the spot while other succumbed in the hospital after about one and half hour.

Had,

the development face been made and kept secured by proper scaling/dressing and supporting before commencement of charging of shot holes as required under Regulation 112(1) read with Regulation 47(3)(a), 46(2)(a), 45(1) of the Metalliferous Mines Regulation, 1961 and safe operating procedure framed by the manager.

this accident could have been averted.

Code : 0300 Transportation Machinery (Non-Winding)

Code : 0334 Conveyors
(1 Death)

12. Date - 16.12.21 Mine - SHREE LIMESTONE MINE
Time - 10.30 Owner - SHREE CEMENT LTD
Dist. - Baloda Bazar, State - Chhattisgarh
Person(s) Killed :
1. Sahdev Singh Barman, Security Guard, Male,
39 Years

While a security guard was crossing a running belt conveyor, near transfer point of two belt conveyors installed at right angle, in an opencast Limestone mine, his left leg was caught in between the carrying belt and impact roller installed below the discharge chute, resulting into multiple injuries to his left leg and chest, to which he succumbed in the hospital while undergoing treatment, after eight days of hospitalisation.

Had,

the fencing been provided near the transfer point area of the belt conveyors, so as to prevent the entry of persons in close proximity of a running belt conveyor, as required under the Regulation 174 (2) of the Metalliferous Mines Regulations, 1961;

the deceased not negligently tried to cross the running belt conveyor, thereby not wilfully endangered his own safety, in contravention of the provisions of the

Regulation 181 also read with Regulation 41 (1) (a) of Metalliferous Mines Regulations, 1961;

the accident could have been averted.

Code : 0335 Dumpers
(1 Death)

13. Date - 03.07.21 Mine - UNCHABALI IRON & MN. MINE
Time - 23.30 Owner - M/S INDRANI PATNAIK
Dist. - Keonjhar, State - Orissa
Person(s) Killed :
1. Sanjay Kumar Rai, Mining Mate, Male, 49
Years

While a tipper was being reversed to get align with a diesel bowser to fill diesel near screen plant of an opencast Metalliferous Mine, hit a mining supervisor during reversing in which he received serious bodily injuries and succumbed on the way to hospital."

Had,

the tipper driver been attentive and used the safety device^{4s} provided with the tipper including rear view camera, rear view mirrors during reversing and not been operated the tipper in reverse unless have a clear view of the area behind the tipper as required under the provisions of clause 12.0(C) (f) of Permission granted vide letter No.33021/SEZ/Chaibasa Region/Perm/2019/2382 dated 19.08.2019 under Regulation 106(2) (b) of Metalliferous Mines Regulations, 1961.

this accident could have been averted.

Code : 0336 Wagon Movements
(1 Death)

14. Date - 09.12.21 Mine - RAJHARA [MECHANISED] IRON ORE MINE
Time - 11.20 Owner - M/S BHILAI STEEL PLANT
Dist. - Durg, State - Chhattisgarh
Person(s) Killed :
1. Pritam Singh Pawar, Excavator Operat,
Male, 50 Years

While a workman was crossing a railway track line belonging to an Opencast Iron Ore mine, suddenly the moving wagon hit him causing fatal injury instantaneously.

Had,

i. the person been warned during the movement of wagon, thereby negligently or willfully not endangering the life of person as required under Regulation 181 of The Metalliferous Mines Regulations, 1961;

ii. the movement of wagon been supervised by a competent person who shall himself control the brake as required under Regulation 104(2) of The Metalliferous Mines Regulations, 1961;

this accident could have been averted.

Code : 0339 Wheeled Trackless (Truck, Tanker, etc.)
(1 Death)

15. Date - 14.09.21 Mine - SATALKHERI LIMESTONE MINE
Time - 11.50 Owner - ASSOCIATED STONE INDUSTRIES (KOTA) LTD.
Dist. - Kota, State - Rajasthan
Person(s) Killed :
1. Radheshyam, Helper, Male, 46 Years

While a loaded truck was going down the gradient on the haul-road of an open cast limestone mine, it's steering failed, the driver lost his control over it and it slide down from haul road to adjoining water catchment area submerging into water resulting in drowning of driver to which he succumbed on the spot."

Had,

the truck not been allowed for loading, unless it was mechanically sound & in safe working order as required under the provisions of Regulation 172 of Metalliferous Mines Regulations, 1961, read with clause 7.0 & 8.0 of the SOP framed for the trucks, used for mineral transportation;

the steering mechanism and parking brake of truck been properly maintained in safe working order as required under the Regulations 176(3) of Metalliferous Mines Regulations, 1961 read with clause 5.1 of permission letter ni.4024/Ajmer dated 07.10.1983 granted under the Regulation 106(2)(b) of Metalliferous Mines Regulations, 1961; and

the height of parapet wall provided on both side of haul road been maintained adequate as required under the clause 3.5 of permission letter no.4024/AJMER dated 07.10.1983 granted under the Regulation 106(2)(b) of Metalliferous Mines Regulations, 1961

The accident could have been averted.

Code : 0400 Machinery Other than Transp. Machinery

Code : 0443 Loading Machines
(1 Death)

16. Date - 22.11.21 Mine - TUMMALAPALLI URANIUM MINE
Time - 22.10 Owner - URANIUM CORPN. OF INDIA LTD.
Dist. - Kadapa (Y.S.R), State - Andhra Pradesh

Person(s) Killed :

1. Mopuri Vasantha Rao, Tradesmen-A, Male, 41

Years

While a workman, at the end of his shift duty, was travelling on a road on the surface of a belowground metalliferous mine, a load haul dump machine hit him from behind inflicting serious bodily injuries him to which he succumbed on the way to the hospital.

Had,

i. travelling roadway been provided separate from haulage roadway between attendance room and main exit gate of the mine as required under the Regulation 96(1) of the Metalliferous Mines Regulations, 1961, and

ii. safe operating procedure been framed and implemented for movement of machinery, thus not negligently omitting to ensure the safety of work persons employed in the mine as required under Regulation 181 of the Metalliferous Mines Regulations, 1961, and

iii. the roadway between attendance room (time office) and main exit gate been placed under the charge of a competent person as required under Regulation 116(1) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

Code : 0447 Crushing & Screening Plants
(3 Deaths)

17. Date - 04.01.21
Time - 4.00

Mine - NARAIN IRON ORE MINE
Owner - A. NARRAIN MINES (P) LTD.
Dist. - Chitradurga, State - Karnataka
Person(s) Killed :
1. B. Halder, Technician, Male, 32 Years

While an operator cum technician of a mobile screening plant in an iron ore opencast mine, was working on one of the section (rear) of elevated conveyor belt assembly, to arrest hydraulic oil leakage from a pressurised hydraulic cylinder holding two sections of the conveyor belt assembly, suddenly the temporarily vertically positioned second section (front), weighing about 650 kg, fell down over the rear section, trapping him in between inflicting fatal injury almost instantaneously.

Had,

(i) the defect in the loop take up mechanism of the conveyor belt assembly of the mobile screening plant was reported to the engineer so as to take corrective action, as required under the provision of Regulation 176(3) of the Metalliferous Mines Regulations, 1961 and

(ii) the temporarily vertically positioned second section (front) of the conveyor belt assembly of mobile screening plant been supported or otherwise secured by some other means so as to prevent it's fall during repairing of hydraulic oil leakage in the hydraulic cylinder, holding two sections of the elevated conveyor belt, thereby

negligently or wilfully not endangered the life of person repairing it as required under Regulation 181 of the Metalliferous Mines Regulations, 1961, and

(iii) it been ensured to follow/implement the safe operating procedure framed for replacement of conveyor belt in the mobile screening plant and effective supervision been ensured, thereby negligently or wilfully omit to do anything likely to endanger life in the mine as required under Regulation 53(a) and 181 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

18. Date - 23.05.21

Time - 20.30

Mine - MAHAGIRI CHROMITE MINE

Owner - INDIAN METAL & FERRO ALLOYS LTD.

Dist. - Jajpur, State - Orissa

Person(s) Killed :

1. Muna Lohar, Welder, Male, 41 Years

While two contractor workers were engaged to repair vibrating feeder located below a bunker installed on the surface of an underground metal mine, welded joints connecting lower conical part and upper part of the bunker failed and the lower conical part (hopper) of the bunker separated from the upper part and collapsed on them to which one person succumbed on the spot and the other person received serious bodily injuries.

Had,

(i) the joints between both the parts of the bunker been of adequate strength, free from defects and properly maintained in safe working order as required under Regulation 172 read with Regulation 53(1) (a) of the Metalliferous Mines Regulations, 1961; and

(ii) non-destructive testing been carried out to determine pitting and corrosion of bunker structure and factor of safety of the bunker been determined as required under Regulation 172 of the Metalliferous Mines Regulations, 1961 read with DGMS(Tech) Circular No.1 of 1999 dated 27.01.1999 and DGMS (Tech) Circular no.1 of 2013 dated 25.02.2013. and

(iii) hazards due to non-maintenance of bunker been identified and risk assessed to ensure safety of work persons engaged during maintenance work and Standard Operating Procedure been prepared and implemented as required under Regulation 172 of the Metalliferous Mines Regulations, 1961 read with DGMS(Tech) circular no.1 of 2013 dated 25.02.2013; and

(iv) adequate number of competent persons including officials like assistant managers, engineers, mechanical/electrical foremen; and technicians been appointed for adequate inspection of bunker as required under Regulation 39(1)(a)(i) of the Metalliferous Mines Regulations, 1961 and to secure running and maintenance to bunker in safe working order as required under Regulation 39(1)(a)(iii) of the Metalliferous Mines Regulations, 1961.

this accident could be averted.

19. Date - 31.05.21

Mine - SAGMANIA L/STONE MINE

Time - 10.10

Owner - BIRLA JUTE & INDUSTRIES LTD.

Dist. - Satna, State - Madhya Pradesh

Person(s) Killed :

1. R. Pal, Cont. Worker, Male, 46 Years

While a contractual mazdoor un-authorisiedly and without justifiable purpose went to the crusher drive unit and interfered with the moving V-belts and drive end pulley of secondary crusher unit in an opencast limestone mine, he was pulled suddenly and his neck was struck with the bracket of the fencing, resulting into completely cut off his head from his neck due to which he succumbed instantaneously.

Had,

i) the cleaning mazdoor not gone to the drive end pulley of a 1200TPH secondary crusher un-authorisiedly and without justifiable purpose i.e. place other than he worked as required under Regulation 41(4) (b) of the Metalliferous Mines Regulations, 1961

ii) the cleaning mazdoor not removed the covering plate of the moving V-belt end pulley and not interfered with the moving V-belts and drive end and thus had not willfully omitted his own safety as required under the provision of the Regulation 181 read with Regulation 174(6) of the Metalliferous Mines Regulations, 1961

this accident could have been averted.

Code : 0500 Explosives

Code : 0551 Solid Blasting Projectiles
(2 Deaths)

20. Date - 10.07.21

Time - 17.30

Mine - D. MURUGAPPANDIYAN ROUGH STONE QUARRY

Owner - SHRI D. MURUGAPANDIYAN

Dist. - Villupuram, State - Tamil Nadu

Person(s) Killed :

1. S.Selvi, Outsider, Female, 47 Years

While two persons (outsiders) were working in banana plantation, suddenly a piece of rock, measuring about 18 cm (length) x 15 cm (width) x 15 cm (thick), ejected to a distance of about 166.40 m during blasting in an Opencast Stone Mine and hit one of them resulting in fatal injury, while the other person narrowly escaped unhurt.

Had,

(i) a duly qualified manager been appointed for overall management, control, supervision and direction of the mine as required under Section 17 of the Mines Act, 1952 read with Regulation 14 of the Metalliferous Mines Regulations, 1961,

(ii) a duly qualified blaster been appointed for preparation of charges, charging and stemming of holes by him or under his personnel supervision and firing shots by himself as required under Regulation 39 read with Regulation 160 of the Metalliferous Mines Regulations, 1961

(iii) foreman been appointed in the mine to hold charge of the mine as required under Regulation 37 of the Metalliferous Mines Regulations, 1961, and mining mate been appointed and workings been placed under the charge of mining mate as required under Regulation 39 read with Regulation 116 of the Metalliferous Mines Regulations, 1961, and

(iv) sufficient warning, by efficient signals given over the entire area falling within a radius of 300 meters from the place of blasting and also ensured that all the persons within such area have taken proper shelter, before firing the shots as required under Regulation 164 (1-A) (b) of the Metalliferous Mines Regulations, 1961

this accident could have been averted.

21. Date - 03.11.21
Time - 7.45

Mine - BAROI GALENA & SPH MINE
Owner - HINDUSTAN ZINC LTD.
Dist. - Udaipur, State - Rajasthan
Person(s) Killed :

1. Ashish Kumar, Mining Mate, Male, 26 Years

While solid blasting was being conducted in belowground development face of a Lead & Zinc mine, the person authorised as Mining Mate firing the shot was hit by the blasting projectiles inflicting serious bodily injuries to him to which he succumbed after about 01 hour 45 minutes while being taken to the hospital.

Had,

a well-insulated cable of sufficient length been used, the circuit been tested either for electrical resistance or for continuity and proper shelter been taken before firing the shots, as required under the Regulation 163 (3) (4) and 164(1) of the Metalliferous Mines Regulations, 1961 and, a person holding managers, Foremans, Mates or blaster certificate been deployed as blaster to carry out electric shot firing and person holding managers or Foremans certificate been deployed as mine foreman to see that the blaster carries out his duties in his district in proper manner as required under Regulation 160(2) and 37(1) read with Regulation 46(2) of the Metalliferous Mines Regulation, 1961,

this accident could have been averted.

Code : 0552 Deep Hole Blasting Projectiles
(1 Death)

22. Date - 24.01.21
Time - 18.30

Mine - GIRIRAJ GRANITE MINE
Owner - M/S GIRIRAJ GRANITE
Dist. - Adilabad, State - Telangana
Person(s) Killed :

1. M.Arumugam, Outsider, Male, 47 Years

While a person was working (helping surveyor) in an opencast granite mine, suddenly blastings were conducted in common boundary area by blasters of the mine and adjoining granite mine simultaneously and a piece of rock, measuring about 22cm x 14cm x 6cm, flew/projected to a distance of about 113m and hit him inflicting

serious bodily injuries to which he succumbed while being taken to the hospital after 40 minutes.

Had,

(i) all persons within the danger zone been taken proper shelter before firing of shots, as required under the provisions of Regulation 164(1-A)(a)&(b) of the Metalliferous Mines Regulations, 1961,

(ii) SOP for conducting blasting operations in mines been framed and implemented thereby willfully or negligently omit to do anything necessary for the safety of persons employed in the mines as required under Reg 181 of Metalliferous Mines Regulation 1961 read with Recommendation No. 9.2 of 11th Conference on Safety in Mines.

this accident could have been averted.

Code : 0559 Other Explosive Accidents
(11 Deaths)

| | |
|---------------------------|--|
| 23. Date - 08.05.21 | Mine - C. KASTURI BAI BARYTES |
| Time - 9.45 | Owner - SMT. C. KASTURI BAI |
| | Dist. - Kadapa(Y.S.R), State - Andhra Pradesh |
| | Person(s) Killed : |
| | 1. K.B.Gangireddy, Miner, Male, 50 Years |
| | 2. S. Abdul, Miner, Male, 30 Years |
| | 3. B. Prasad, Miner, Male, 40 Years |
| | 4. P. Eashwaraiah, Miner, Male, 45 Years |
| | 5. K. Prasad, Driver, Male, 36 Years |
| | 6. P.L. Reddy, Contractor, Male, 60 Years |
| | 7. J.N.S. Reddy, Miner, Male, 40 Years |
| | 8. Y.B. Gangulaiah, Miner, Male, 35 Years |
| | 9. Y. Venkataramana, Miner, Male, 25 Years |
| | 10. T. Venkatesh, Miner, Male, 25 Years |

While eight persons were unloading explosives & detonators (quantity not known) from the dickey of a car which was being supervised by another person (unqualified supervisor), suddenly explosives detonated pre-maturely causing fatal injuries to all eight persons, the supervisor and the car driver (present at the site).

Had,

i) the explosive(s), issued from the magazine, been taken into the mine in a heavily galvanized case or container of substantial construction and securely locked and the detonators been carried in a separate container constructed of non-conductive material and the explosives & detonators been carried separately as required under Regulation 157(1) & 157(2) of Metalliferous Mines Regulations, 1961

ii) the duly qualified manager been appointed for overall management, control, supervision and direction of the mine as required under Section 17 of the Mines Act, 1952 read with Regulation 34(1) of the Metalliferous Mines Regulations, 1961,

iii) Asst. Manager, Mine Forman, Mining Mate & Blaster were appointed for supervision of the mining operations including blasting in the mine as required under Regulation 35, 37, 39 & 116 of the Metalliferous Mines Regulations, 1961, and

iv) the persons been imparted basic training and undergone a course of training of handling & use of explosive as detailed in the 6th schedule as required under Rule 6 and 13(1) of the Mines Vocational Training Rule, 1966

this accident could have been averted.

24. Date - 20.05.21 Mine - BILLI MARKUNDI STONE MINE
 Time - 13.30 Owner - M/S C.S. INFRACONSTRUCTION LTD.
 Dist. - Sonebhadra, State - Uttar Pradesh
 Person(s) Killed :
 1. Nandlal Yadav, Mining Mate, Male, 32 Years

While a mining mate deployed as blaster along with blasting Mazdoor and contractor was returning from one of the blasting site after disconnecting electric detonator from detonating fuse due to approach and progress of an electric storm, suddenly charged holes at other nearby site connected with detonating fuse and electric detonator exploded due to strike of lighting causing serious bodily injuries to mining mate due to fly rock to which he succumbed on the way to hospital while other escaped with minor injuries.

Had,

the blaster himself taken adequate shelter along with his assistant during the approach and progress of an electric storm, as required under Regulation 164(1) of the Metalliferous Mines Regulations, 1961 read with DGMS Circular no.Tech.1/1995 and,

the exposed detonating fuse been disconnected from already connected electric detonator at all the blasting site, coiled up and covered by something other than a metal plate so as to prevent the charged holes exploding prematurely by a local strike of the lighting, thus not negligently endangering life of the persons employed in the mine as required under Regulation 181 of the Metalliferous Mines Regulations, 1961 read with DGMS Circular no.Tech.01/1995.

this accident could have been averted.

 Code : 0600 Electricity

 Code : 0669 Other Electrical Accidents
 (1 Death)

25. Date - 01.09.21 Mine - BOLANI IRON ORE MINE
 Time - 8.50 Owner - RAW MATERIAL DIVISION (SAIL)
 Dist. - Keonjhar, State - Orissa
 Person(s) Killed :
 1. Tapan Banerjee, Contract Labour, Male, 47
 Years

While a contractual Mazdoor was attending an electrical job without effective supervision came in contact with live electricity and was declared brought dead on arrival at hospital,

Had,

i. the proper shutdown been taken prior to commencement of job as required under Regulation 19(1) of Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010;

ii. the job been carried out under the supervision of a competent electrical supervisor, as required under Regulation 115(1)(i)(ii) of Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010,

iii. the earth fault protection of the switchgears been maintained in working condition as required under Regulation 100(1) & Regulation 100(3) of Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010.

This accident could've been averted.

Code : 0800 Falls(Other than Falls of Ground)

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

26. Date - 05.01.21 Mine - BABARMAL PINK MARBLE MINE M/L 67/1993
Time - 8.00 Owner - M/S TAPASYA MINE & MINERALS PVT LTD
Dist. - Udaipur, State - Rajasthan
Person(s) Killed :
1. Sunder Lal, Mazdoor, Male, 22 Years

While a workman was pulling 3/4'' diameter PVC pipeline standing at an edge of marble bench in an opencast mine, he suddenly lost balance and fell on lower bench from a height of about 4m resulting into serious bodily injury to which he succumbed after 4 hours while being treated in hospital.

Had,

i) the mine placed under the charge of a duty qualified manager to ensure that all work in the mine was carried on in accordance with the provisions of the Mines Act, and of regulations, rules, bye-laws and orders made there-under whereby safety of the mine and safety of persons employed in the mine was ensured in every respect, as required by the provisions of Section 17(1) and Section 18(1)&(4) of the Mines Act, 1952, read with Regulation 34(1) of the Metalliferous Mines Regulations, 1961;

ii) the workman not been permitted to work near the edge of bench, from where he was likely to slip or overbalance unless was secured by safety belt or life line, as required under the provisions of Regulation 114(2) of the Metalliferous Mines Regulations, 1961 read with Section 18(1)&(4) of the Mines Act, 1952 and

iii) fencing of adequate size and dimension been provided and maintained along the edge of vertical bench/s as required under the provisions of Regulation 115(2) of the Metalliferous Mines Regulations, 1961;

this accident could have been averted.

| | |
|------------------------------------|---|
| 27. Date - 18.02.21 Time - 9.45 | Mine - MASSARO KI OBERI SERPENTINE MINE ML15/19 Owner - DILIP SINGH RATHORE Dist. - Udaipur, State - Rajasthan Person(s) Killed : 1. Hema Ram, Mistry, Male, 46 Years |
|------------------------------------|---|

While a workman was filling an air in the airbag for separating a pre-cut serpentine/green marble block, suddenly a part of serpentine block measuring 3m long x 3m wide and 4m-5m in height slide along the natural crack due to which he lost his balance and fell on the floor of the bench from a height of about 7m and partially buried beneath the slid block resulting bodily injury to his head to which he succumbed short while later.

Had,

the workman not been permitted to work near the edge of bench, from where he was likely to slip or overbalance unless he was secured by safety belt or life line, as required under the provisions of Regulation 114(2) of the Metalliferous Mines Regulations, 1961 read with section 18(4) of the Mines Act, 1952,

this accident could have been averted.

| | |
|------------------------------------|---|
| 28. Date - 02.03.21 Time - 8.30 | Mine - KBC INFRASTRUCTURES STONE QUARRY Owner - M/S KBC INFRASTRUCTURE PVT LTD Dist. - Guntur, State - Andhra Pradesh Person(s) Killed : 1. Uppu Dayakar, Driller, Male, 44 Years |
|------------------------------------|---|

While a drill crew of two persons were drilling holes by jack hammer on the edge of sloping stone bench (more than 45 degree from horizontal), having dimension 40.0m (height) x 1.0m (width), suddenly a stone boulder, measuring about 107m (length) x 61m (width) x 30cm (thickness), remained at the top edge of the stone bench, rolled down from a height of about 40.0m and hit one of them, who in turn slipped and fell down to a depth of about 40.0m inflicting serious bodily injury to which he succumbed while being taken to hospital.

Had,

(i) the loose stone, remained within a distance of three metres from the top edge or side of the bench, been removed as required under Regulation 106(4) of the Metalliferous Mines Regulations, 1961,

(ii) the sides of the opencast workings been adequately benched as required under the conditions of the permission granted under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961 vide letter No. HR-2/DMS/106(2)(b)/45(16)/2016/1552, dated 11/05/2016,

(iii) the person been not permitted to work at a place having inclination of more than 45 degree unless secure by a safety belt or life-line or otherwise safe

guarded as required under Regulation 114(2) of the Metalliferous Mines Regulations, 1961,

(iv) mine4 foreman and mining mate been appointed for supervision of the opencase workings (in this case drilling job) as required under Regulation 37 and Regulation 116 of the Metalliferous Mines Regulation, 1961, and,

(v) the person been imparted vocational training as required under Rule 6(1) of the Mines Vocational Training Rules, 1966.

this accident could have been averted.

29. Date - 06.07.21
Time - 16.00

Mine - VENKATRAMAN ROUGH STONE QUARRY

Owner - M. VENKATARAMAN

Dist. - Krishnagiri, State - Tamil Nadu

Person(s) Killed :

1. Vijay thangaraj, Operator, Male, 32 Years

While a person was driving a compressor mounted tractor, on a narrow steep haul road, 1 in 7.45 gradient, in a stone mine, suddenly, the tractor became uncontrolled during negotiating a curve and fell down to a depth of about 2.5m inflicting serious bodily injuries to which he succumbed after about one hour in hospital."

Had,

(i) a duly qualified manager been appointed in the mine for the overall management, control, supervision and direction, as required under the provisions of Section 17 of the Mines Act, 1952, read with Regulation 34(1)(a) of the Metalliferous Mines regulations, 1961;

(ii) the width of the roads been maintained three times the width of the largest vehicle plying on the road as required under the provisions of Regulation 106 of the Metalliferous Mines Regulations, 1961 read with DGMS Cir. 36/1972 & Tech. 17/1977.

(iii) the gradient of the haul road been maintained not more than 1 in 16, as required under the provisions of Regulation 106 of the Metalliferous Mines Regulation, 1961, read with DGMS Tech.No.11/1973;

(iv) a berm, not less than 1m in height, has been provided along haul road as required under the provisions of Regulation 106 of the Metalliferous Mines Regulations, 1961 read with DGMS Cir. Tech.No.11/1973 ; and

(v) the person employed in the mine been imparted vocational training as required under Rule 6 of the Mines Vocational Training Rules, 1966;

this accident could have been averted.

30. Date - 31.07.21
Time - 17.45

Mine - PEARL GRANITE 55/6 B

Owner - PEARL MINERALS LTD.

Dist. - Prakasham, State - Andhra Pradesh

Person(s) Killed :

1. A. Mallikarjuna, Wireman, Male, 34 Years

While a person was working on the lighting tower, suddenly he slipped from a height of about 6.0m and fell over a granite block inflicting serious bodily injuries to which he succumbed while being shifted to hospital.

Had,

(i) the person been provided and secured with safety belt or life line and safe guarded while working at a height, where he is likely to slip or overbalance or is otherwise safeguarded while working at the height as required under Regulation 114(2) of the Metalliferous Mines Regulations, 1961.

(ii) the working been placed under the charge of a competent person as required under Regulation 39 of the Metalliferous Mines Regulations, 1961.

(iii) the code of practice for the persons working at height been framed and implemented thereby willfully or negligently omit to do anything necessary for the safety of persons employed in the mines as required under Reg 181 of Metalliferous Mines Regulation 1961 read with Recommendation No. 9.2 of 11th Conference on Safety in Mines and Condition No.21.14 of Perm.No.HR2/SCZ/106(2) (b)/97/18/2018/4042, dt: 31-01-2018.

this accident could have been averted.

Code : 0900 Other Causes

Code : 0992 Flying Pieces (Except due to Explosives)
(1 Death)

31. Date - 09.07.21
Time - 9.20

Mine - CENTRAL ASSET MINE
Owner - OIL INDIA LTD.
Dist. - Dibrugarh, State - Assam
Person(s) Killed :
1. Raju Dey, Listed III WCL, Male, 48 Years

While 04 work persons were testing a safety Relief valve on a portable test bench in an oil collecting station of an oil mine, safety valve failed releasing the accumulated air causing test bench to be dislodged due to which one of the work person was fatally injured while others escaped unhurt.

Had,

- test bench been provided with proper grouting /anchoring to rigid structure as required under Reg.111(1) read with OISD-STD-128.

- test bench been provided with guard to protect work persons working nearby in the event of failure of any component as required under Reg.111(2) READ WITH oisd-std-128.

- arrangement to drain the pressure prior to adjusting the safety valve been provided in working condition as required under Reg.111(1) read with OISD-STD-128.

- safety valve Data sheet been checked for possible failures prior to testing as required under Reg.109(4) read with OISD STD 106.

- Identification of Hazard, Assessment of Risk and measures to eliminate the identified hazards Risk been carried out with respect to job done on test bench. As required under Reg.131(1)(f)(iii) of the Oil Mines regulations, 2017.

this accident could have been averted.

Code : 0993 Drowning in Water
(1 Death)

32. Date - 07.05.21 Mine - BHARUCH EXPLORATORY OIL & GAS MINE
Time - 15.30 Owner - M/S VEDANTA LTD CAIRN OIL & GAS
Dist. - Bharuch, State - Gujarat
Person(s) Killed :
1. V.S. Bhai, Helper, Male, 21 Years

While an outsider (villager) came to work as a helper to plumber in exploratory oil & gas mine had entered unauthoriesly into water tank filled up to 2m and kept fenced, got drowned shot while later.

Had,

i) the drowning warning displayed outside the fencing of drilling water tank not been violated negligently or willfully by deceased and crossed the fence and not entered in fully filled drilling water tank for taking bath thereby not endangering his own life, as required under provisions of Regulation 26(10) read with Regulation 133 of the Oil Mines Regulations, 2017

ii) the precautions been taken to prevent outsider from accessing the drilling water tank to take bath as required under Regulation 130(d) of Oil Mine Regulations, 2017 read with Regulations 29(b) & 33(1) of the Oil Mines Regulations, 2017

iii) relevant workplace safety, health hazard awareness and training been provided to work persons prior to commencing work within the premises of mine as required under Regulation 25(1)(c) of Oil Mines Regulation, 2017

iv) the duty assigned to site supervisors, appointed as competent person to ensure safety of work person deployed in the mine, been exercised properly in accordance with the provision of the Act Regulations as required under Regulation 33(1) of Oil Mines Regulations, 2017,

this accident could have been averted.

Code : 0995 Bursting/Leakage of Oil Pipe Lines
(1 Death)

33. Date - 05.10.21 Mine - MOHULDIH URANIUM MINE
Time - 13.20 Owner - URANIUM CORPN. OF INDIA LTD.

Dist. - Saraikhela Kharsawan, State - Jharkhand

Person(s) Killed :

1. Shyam Murmu, Contractual Labour, Male, 29

Years

While a crew of 06 persons were engaged for mucking at pit bottom of a sinking shaft by using hydraulic loader in Metalliferous mine, suddenly a hydraulic hose of boom cylinder of hydraulic loader bursted resulting in uncontrolled movement of loader bucket that hit a person at pit bottom inflicting serious bodily injuries to which he succumbed after one hour and ten minutes while being treated in the hospital.

Had,

(i) no person been allowed to clean at shaft pit bottom where there is risk of injury while machinery in motion as required under Regulation 174 (3) of MMR 1961.

(ii) no person been allowed to work below the loader operator station while loader in operation as mentioned in para 5 of brief operation of loading attachment provided by OEM and appropriate SOP of loader been made by considering this point thereby not endangered life of the person in the mine as required under Regulation 181 of MMR 1961.

(iii) preventive maintenance of loader been carried out as required under Regulation 172 & 176 (5) of MMR 1961.

This accident could have been averted.



2022



9. ACCIDENT ANALYSIS IN NON-COAL MINES: 2022

- The number of fatal accidents in non coal mines in the year 2022 stands at 40(Including 3 accident in Oil Mine) with 54 fatalities(Including 3 fatalities in Oil Mine) and 13 seriously injured (no serious injury in Oil Mine) in these fatal accidents. The number of fatal accidents has increased as compared to previous year 2021.
- The number of serious accidents in the year 2022 stands at 48 (including 7 serious accidents in Oil Mine) with 52 (including 7 serious injuries in Oil Mine) seriously injured persons in these serious accidents. The number of serious accidents has increased as compared to previous year 2021.
- Among the broad category of causes, most number of fatal accident occurred due to “Fall of Sides (other than overhangs)”. However, most number of serious accident occurred due to “Fall of person from Height/into Depth”. Details can be seen in the statement 9.2.
- Maximum number of fatal accident occurred in Stone Mine. Maximum number of serious accident occurred is also in Iron Ore Mine. Details can be seen in the statement 9.1.
- Maximum number of fatal accident occurred in the mines in Northern Zone of this Directorate and maximum number of serious accident occurred in the mines under Western Zone of this Directorate.
- Major Accident:
 - Date of Accident: 01 January 2022; Mine Name: Dadam Stone Mine; Mine Owner: M/S HSIIDC Ltd.; Number of Persons Killed: 05; Number of Persons Seriously Injured: 3
 - Cause of the Accident: While contractor workers and consumer employees were deployed at the bed of quarry of an opencast stone mine having high and almost vertical single bench on eastern and western side, suddenly a huge rock mass of size measuring about 28m(L) x 8-10m(W) x 30m(Height) parted from western side from a height of about 10 to 40m and buried the men and machineries deployed at the quarry floor that resulted into death of five workers almost on the spot and serious injuries to three workers.
 - What could have averted this accident: Had,
 1. the sides of an excavation been adequately benched, sloped and kept secured to prevent the danger of fall of side, as required under the provisions of the Regulation 106(3) of the Metalliferous Mines Regulations, 1961 read with condition no.2.1(b)&(c) of permission issued vide this Directorate's letter no.516936/NZ/Ghaziabad Region/Perm/2021/9178/1393 dated 17.06.2021,
 2. the loose stones and debris not been allowed to remain within a distance of 3m from the top edge of the excavation, as required under the provisions of the Regulation 106(4) of the Metalliferous Mines Regulations, 1961,

3. the adequate number of Mining Mate and Mine foreman been appointed in pit no.37 & 38 in first shift for thorough supervision and to hold the charge of different pits in the mine respectively as required under Regulation 39 (1)(a) read with Regulation 116 and Regulation 37(1) of the Metalliferous Mines Regulations, 1961 and
 4. the workings of pit no. 37 & 38 been thoroughly inspected, the subordinate officials and competent persons carried out their duties in proper manner, all the persons from dangerous place been withdrawn & the dangerous place been adequately fenced off as required under Regulation 46(1)(c), (2)(a), (7),47(1)(b) & 45(1) & (2) of the Metalliferous Mines Regulations, 1961, this accident could have been averted.
- Recommendations: Recommended suitable action as deemed fit may be taken against delinquents for contravening the provisions of the Metalliferous Mines Regulations, 1961 and Mines Act, 1952 contributing to the accident.

STATEMENT 9.1

Accidents and placewise casualties in non-coal mines by state-district wise 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 | M | F | M | F | | M | M | F | M | F | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 1. | Oil | | | | | | | | | | | | | | |
| | Andhra Pradesh | | | | | | | | | | | | | | |
| | East Godavari | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| | TOTAL : ANDHRA PRADESH | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| | Assam | | | | | | | | | | | | | | |
| | Dibrugarh | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| | Jorhat | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL : ASSAM | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 2 |
| | Gujarat | | | | | | | | | | | | | | |
| | Gandhinagar | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | Mehasana | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | Surat | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | TOTAL : GUJARAT | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 |
| | Rajasthan | | | | | | | | | | | | | | |
| | Jaisalmer | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | TOTAL : RAJASTHAN | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |

| | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| West Bengal Burdwan | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : WEST BENGAL | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : OIL | 3 | 7 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 7 | 0 | 7 |
| 2. Chromite Orissa Jajpur | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| TOTAL : ORISSA | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| ALL INDIA : CHROMITE | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 3. Copper Jharkhand West Singbhum | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| TOTAL : JHARKHAND | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Madhya Pradesh Balaghat | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| TOTAL : MADHYA PRADESH | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| Rajasthan Jhunjhunu | 1 | 5 | 1 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 1 | 0 | 6 |
| TOTAL : RAJASTHAN | 1 | 5 | 1 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 1 | 0 | 6 |
| ALL INDIA : COPPER | 2 | 6 | 2 | 0 | 0 | 0 | 0 | 2 | 6 | 0 | 0 | 2 | 0 | 8 |
| 4. Dolomite Maharashtra Chandrapur | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |

| | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TOTAL : MAHARASHTRA | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Telangana Khammam | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| TOTAL : TELANGANA | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| ALL INDIA : DOLOMITE | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 5. Galena & Sphalarite Rajasthan Udaipur | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| Rajsamand | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 2 |
| TOTAL : RAJASTHAN | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 3 |
| ALL INDIA : GALENA & SPHALARITE | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 3 |
| 6. Gold Karnataka Raichur | 1 | 6 | 1 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 4 | 0 | 7 |
| TOTAL : KARNATAKA | 1 | 6 | 1 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 4 | 0 | 7 |
| ALL INDIA : GOLD | 1 | 6 | 1 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 4 | 0 | 7 |
| 7. Granite Andhra Pradesh Guntur | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Prakasham | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : ANDHRA PRADESH | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kerala Cannanore | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

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|-----------------------------------|---|----|---|---|---|---|---|---|---|---|---|---|---|----|
| TOTAL : KERALA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rajasthan Ajmer | 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 |
| ALL INDIA : GRANITE | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8. Iron Chhattisgarh Durg | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Dantewara | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 5 |
| TOTAL : CHHATTISGARH | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 4 | 0 | 6 |
| Jharkhand West Singbhum | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 |
| TOTAL : JHARKHAND | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 |
| Karnataka Bellary | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| TOTAL : KARNATAKA | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| Orissa Keonjhar | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 2 |
| TOTAL : ORISSA | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 2 |
| ALL INDIA : IRON | 2 | 12 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 9 | 0 | 12 |
| 9. Limestone Gujarat Amreli | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kutch | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : GUJARAT | 1 | 1 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 1 |
| Rajasthan Pali | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL : RAJASTHAN | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| ALL INDIA : LIMESTONE | 1 | 2 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 2 |
| 10. Manganese Madhya Pradesh Balaghat | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 3 |
| TOTAL : MADHYA PRADESH | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 3 |
| Maharashtra Nagpur | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| TOTAL : MAHARASHTRA | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| Orissa Keonjhar | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : ORISSA | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : MANGANESE | 2 | 5 | 1 | 1 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 1 | 0 | 5 |
| 11. Marble Rajasthan Alwar | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nagaur | 4 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 3 | 0 | 0 | 0 | 3 |
| Rajsamand | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| TOTAL : RAJASTHAN | 5 | 1 | 0 | 6 | 0 | 0 | 0 | 6 | 0 | 3 | 0 | 1 | 0 | 4 |

| | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ALL INDIA : MARBLE | 5 | 1 | 0 | 6 | 0 | 0 | 0 | 6 | 0 | 3 | 0 | 1 | 0 | 4 |
| 12. Sillimanite | | | | | | | | | | | | | | |
| Tamil Nadu | | | | | | | | | | | | | | |
| Kanyakumari | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 2 |
| TOTAL : TAMIL NADU | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 2 |
| ALL INDIA : SILLIMANITE | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 2 |
| 13. Steatite | | | | | | | | | | | | | | |
| Andhra Pradesh | | | | | | | | | | | | | | |
| Anantpur | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : ANDHRA PRADESH | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : STEATITE | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14. Stone | | | | | | | | | | | | | | |
| Haryana | | | | | | | | | | | | | | |
| Bhiwani | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 3 | 0 | 0 | 0 | 3 |
| TOTAL : HARYANA | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 3 | 0 | 0 | 0 | 3 |
| Jharkhand | | | | | | | | | | | | | | |
| Koderma | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 1 |
| Palamu | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : JHARKHAND | 3 | 1 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 1 |
| Karnataka | | | | | | | | | | | | | | |
| Kolar | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| Tumkur | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chamarajanagar | 2 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 0 | 3 | 0 | 0 | 0 | 3 |
| TOTAL : KARNATAKA | 4 | 0 | 0 | 8 | 0 | 0 | 0 | 8 | 0 | 4 | 0 | 0 | 0 | 4 |

| | | | | | | | | | | | | | | |
|-----------------------------------|----|----|---|----|---|---|---|----|----|----|---|----|---|----|
| Rajasthan | | | | | | | | | | | | | | |
| Ajmer | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bharatpur | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jaipur | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sikar | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 |
| TOTAL : RAJASTHAN | 3 | 1 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 4 |
| Uttar Pradesh | | | | | | | | | | | | | | |
| Sonbhadra | 2 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : UTTAR PRADESH | 2 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : STONE | 13 | 2 | 0 | 24 | 0 | 0 | 0 | 24 | 0 | 8 | 0 | 4 | 0 | 12 |
| 15. Atomic Mineral | | | | | | | | | | | | | | |
| Jharkhand | | | | | | | | | | | | | | |
| East Singhbhum | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL : JHARKHAND | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : ATOMIC MINERAL | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL INDIA : ALL NON-COAL MINERALS | 40 | 48 | 8 | 42 | 0 | 4 | 0 | 54 | 16 | 16 | 0 | 33 | 0 | 65 |

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

Number of accidents and casualties/seriously injured persons in non-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 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| Copper | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| Atomic Mineral | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : FALL OF ROOF | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 |
| Manganese | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| Marble | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 |
| Stone | 0 | 0 | 0 | 0 | 0 | 6 | 16 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 16 | 6 | 0 | 0 |
| TOTAL : FALL OF SIDES (OTHER THAN OVERHANGS) | 1 | 1 | 0 | 1 | 1 | 10 | 23 | 6 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 11 | 24 | 6 | 2 | 2 |
| TOTAL : GROUND MOVEMENT | 3 | 3 | 1 | 1 | 1 | 10 | 23 | 6 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 13 | 26 | 7 | 2 | 2 |
| Galena & Sphalarite | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : FALLS OF OBJECTS FROM CAGES, SKIP ETC. | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Copper | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| TOTAL : OTHER ACCIDENT DUE TO WINDING OPERATION | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| TOTAL : TRANSPORTATION MACHINERY (WINDING) | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 |
| Steatite | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : ROPE HAULAGE | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Copper | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 |
| Manganese | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : OTHER RAIL TRANSPORTATION | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 3 | 3 |

| | | | | | | | | | | | | | | | | | | | | | |
|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Chromite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| | Galena & Sphalarite | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : | CONVEYORS | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 |
| | Iron | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 0 | 1 | 1 |
| | Manganese | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : | DUMPERS | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 3 | 0 | 1 | 1 |
| | Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| | Chromite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| | Manganese | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | |
| | Stone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| TOTAL : | WHEELED TRACKLESS (TRUCK, TANKER, ETC.) | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 3 | 3 | 0 | 2 | 2 |
| ----- | | | | | | | | | | | | | | | | | | | | | |
| TOTAL : | TRANSPORTATION MACHINERY (NON-WINDING) | 1 | 1 | 0 | 3 | 3 | 5 | 5 | 0 | 1 | 1 | 1 | 1 | 0 | 4 | 4 | 7 | 7 | 0 | 8 | 8 |
| ----- | | | | | | | | | | | | | | | | | | | | | |
| | Galena & Sphalarite | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| | Limestone | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : | DRILLING MACHINES | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| | Galena & Sphalarite | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : | LOADING MACHINES | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| | Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : | OTHER HEAVY EARTH MOVING MACHINERY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| | Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| | Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : | OTHER NON-TRANSPORTATION MACHINERY | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| ----- | | | | | | | | | | | | | | | | | | | | | |
| TOTAL : | MACHINERY OTHER THAN TRANSP. MACHINERY | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 5 | 5 |
| ----- | | | | | | | | | | | | | | | | | | | | | |
| | Stone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| TOTAL : | OTHER EXPLOSIVE ACCIDENTS | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| ----- | | | | | | | | | | | | | | | | | | | | | |
| TOTAL : | EXPLOSIVES | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| ----- | | | | | | | | | | | | | | | | | | | | | |
| | Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : | OTHER ELECTRICAL ACCIDENTS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| ----- | | | | | | | | | | | | | | | | | | | | | |
| TOTAL : | ELECTRICITY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| ----- | | | | | | | | | | | | | | | | | | | | | |

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|--|---|---|---|---|---|---|----|---|---|---|---|---|---|---|---|----|----|---|----|----|----|
| Gold | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| TOTAL : OTHER ACCIDENTS DUE TO DUST/GAS/FIRE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| <hr/> | | | | | | | | | | | | | | | | | | | | | |
| TOTAL : DUST, GAS & OTHER COMBUSTIBLE MATERIAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| <hr/> | | | | | | | | | | | | | | | | | | | | | |
| Copper | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Dolomite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Gold | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| Granite | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Limestone | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Manganese | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Marble | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 0 | 0 |
| Sillimanite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 2 | 1 | 1 | 0 | 1 | 2 | 2 |
| Stone | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 0 | 0 | 0 |
| TOTAL : FALL OF PERSON FROM HEIGHT/INTO DEPTH | 1 | 1 | 1 | 2 | 2 | 7 | 8 | 3 | 1 | 1 | 1 | 1 | 0 | 4 | 5 | 9 | 10 | 4 | 7 | 8 | 8 |
| <hr/> | | | | | | | | | | | | | | | | | | | | | |
| Gold | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| TOTAL : FALL OF PERSONS ON THE SAME LEVEL | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| <hr/> | | | | | | | | | | | | | | | | | | | | | |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 2 |
| Stone | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| TOTAL : FALL OF OBJECTS INCL. ROLLING OBJECTS | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 2 |
| <hr/> | | | | | | | | | | | | | | | | | | | | | |
| Dolomite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| TOTAL : OTHER ACCIDENTS DUE TO FALLS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| <hr/> | | | | | | | | | | | | | | | | | | | | | |
| TOTAL : FALLS (OTHER THAN FALL OF GROUND) | 1 | 1 | 1 | 2 | 2 | 9 | 10 | 3 | 1 | 1 | 2 | 2 | 0 | 8 | 9 | 12 | 13 | 4 | 11 | 12 | 12 |
| <hr/> | | | | | | | | | | | | | | | | | | | | | |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| Copper | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| Granite | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| Marble | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| TOTAL : FLYING PIECES (EXCEPT DUE TO EXPLOSIVES) | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 0 | 2 | 2 | 2 |
| <hr/> | | | | | | | | | | | | | | | | | | | | | |
| Galena & Sphalarite | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| TOTAL : DROWNING IN WATER | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | | | | | | | | | | | | | | | |
| Oil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 5 | 5 | 1 | 1 | 0 | 5 | 5 | 5 |
| Copper | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| Gold | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 3 | 3 | 3 |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 5 | 5 | 5 |

| | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|-----------|---|---|---|----|----|----|----|----|---|---|---|---|---|----|----|----|----|----|----|----|
| | Manganese | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| | Marble | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| | Stone | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 1 | 4 |
| TOTAL : UNCLASSIFIED | | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 13 | 16 | 1 | 1 | 0 | 18 | 25 |
| ----- | | | | | | | | | | | | | | | | | | | | | |
| TOTAL : OTHER CAUSES | | 1 | 1 | 0 | 5 | 5 | 2 | 2 | 0 | 1 | 1 | 1 | 1 | 0 | 14 | 17 | 4 | 4 | 0 | 20 | 23 |
| ----- | | | | | | | | | | | | | | | | | | | | | |
| ALL INDIA : ALL NON-COAL MINERALS | | 8 | 8 | 3 | 13 | 13 | 28 | 42 | 10 | 6 | 6 | 4 | 4 | 0 | 29 | 33 | 40 | 54 | 13 | 48 | 52 |
| ----- | | | | | | | | | | | | | | | | | | | | | |

STATEMENT 9.3

Fatal accidents and casualties in non-coal mines by broad cause in 2022

| Cause/Mineral | Oil | Copper | Galena | Gold | Iron | Lime- Stone | Mang- anese | Stone | Others | TOTAL |
|--------------------|-----|--------|--------|------|------|----------------|----------------|-------|--------|-------|
| Fall of Roof | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| Killed-S/Injured : | 0-0 | 1-1 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 1-0 | 2-1 |
| Fall of Sides | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 6 | 3 | 11 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 3-0 | 1-0 | 16-6 | 4-0 | 24-6 |
| Rope Haulage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 1-0 | 1-0 |
| Dumpers | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 3 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 2-0 | 0-0 | 1-0 | 0-0 | 0-0 | 3-0 |
| Trucks | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 |
| Killed-S/Injured : | 1-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 1-0 | 1-0 | 3-0 |
| Other Machinery | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| Killed-S/Injured : | 0-0 | 1-1 | 1-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 1-0 | 3-1 |
| Explosives | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 1-1 | 0-0 | 1-1 |
| Fall of Persons | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 5 | 10 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 1-1 | 0-0 | 0-0 | 0-0 | 5-0 | 5-3 | 11-4 |
| Fall of Objects | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| Killed-S/Injured : | 1-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 1-0 | 0-0 | 2-0 |
| Other causes | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |

| | | | | | | | | | | |
|--------------------|-----|-----|-----|-----|-----|-----|-----|------|------|-------|
| Killed-S/Injured : | 1-0 | 0-0 | 1-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 2-0 | 4-0 |
| ----- | | | | | | | | | | |
| Belowground | 0 | 2 | 2 | 1 | 0 | 0 | 1 | 0 | 2 | 8 |
| Killed-S/Injured : | 0-0 | 2-2 | 2-0 | 1-1 | 0-0 | 0-0 | 1-0 | 0-0 | 2-0 | 8-3 |
| Opencast | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 13 | 11 | 28 |
| Killed-S/Injured : | 0-0 | 0-0 | 0-0 | 0-0 | 2-0 | 3-0 | 1-0 | 24-7 | 12-3 | 42-10 |
| Aboveground | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| Killed-S/Injured : | 3-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 0-0 | 1-0 | 4-0 |
| ----- | | | | | | | | | | |
| TOTAL | 3 | 2 | 2 | 1 | 2 | 1 | 2 | 13 | 14 | 40 |
| Killed-S/Injured : | 3-0 | 2-2 | 2-0 | 1-1 | 2-0 | 3-0 | 2-0 | 24-7 | 15-3 | 54-13 |
| ----- | | | | | | | | | | |

STATEMENT 9.4

Serious accidents and seriously injured persons in non-coal mines by broad causes in 2022

| Cause/Mineral | Oil | Copper | Galena | Gold | Iron | Lime- Stone | Mang- anese | Stone | Others | TOTAL |
|--------------------------------|--------|--------|--------|--------|--------|----------------|----------------|--------|--------|----------|
| Fall of Roof S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Fall of Sides S/Injured : | 1 1 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 1 1 | 0 0 | 0 0 | 2 2 |
| Rope Haulage S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Dumpers S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 1 1 | 0 0 | 0 0 | 0 0 | 0 0 | 1 1 |
| Trucks S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 1 1 | 1 1 | 0 0 | 2 2 |
| Other Machinery S/Injured : | 0 0 | 2 2 | 3 3 | 0 0 | 2 2 | 1 1 | 1 1 | 0 0 | 1 1 | 10 10 |
| Explosives S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Fall of Persons S/Injured : | 0 0 | 1 1 | 0 0 | 2 2 | 1 1 | 1 1 | 1 1 | 0 0 | 2 3 | 8 9 |
| Fall of Objects S/Injured : | 0 0 | 0 0 | 0 0 | 0 0 | 2 2 | 0 0 | 0 0 | 0 0 | 0 0 | 2 2 |
| Other causes S/Injured : | 6 6 | 3 3 | 0 0 | 4 4 | 6 6 | 0 0 | 1 1 | 1 4 | 2 2 | 23 26 |

| | | | | | | | | | | |
|-------------|---|---|---|---|----|---|---|---|---|----|
| <hr/> | | | | | | | | | | |
| Belowground | 0 | 4 | 3 | 2 | 0 | 0 | 4 | 0 | 0 | 13 |
| S/Injured : | 0 | 4 | 3 | 2 | 0 | 0 | 4 | 0 | 0 | 13 |
| Opencast | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 1 | 0 | 6 |
| S/Injured : | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 1 | 0 | 6 |
| Aboveground | 7 | 2 | 0 | 4 | 9 | 0 | 1 | 1 | 5 | 29 |
| S/Injured : | 7 | 2 | 0 | 4 | 9 | 0 | 1 | 4 | 6 | 33 |
| <hr/> | | | | | | | | | | |
| TOTAL | 7 | 6 | 3 | 6 | 12 | 2 | 5 | 2 | 5 | 48 |
| S/Injured : | 7 | 6 | 3 | 6 | 12 | 2 | 5 | 5 | 6 | 52 |
| <hr/> | | | | | | | | | | |

STATEMENT 9.5**Regionwise/zonewise accidents in non-coal mines in 2022**

| Region/Zone | Fatal Accidents | | | Serious Accidents | |
|--------------------|------------------|------------|-----------|-------------------|-----------|
| | No. of Accidents | Fatalities | S/Injured | No. of Accidents | S/Injured |
| Koderma | 2 | 2 | 0 | 1 | 1 |
| Central Zone | 2 | 2 | 0 | 1 | 1 |
| Guwahati | 1 | 1 | 0 | 2 | 2 |
| Sitarampur I | 1 | 1 | 0 | 0 | 0 |
| Eastern Zone | 2 | 2 | 0 | 2 | 2 |
| Ahmedabad | 1 | 3 | 0 | 3 | 3 |
| Surat | 0 | 0 | 0 | 1 | 1 |
| Udaipur | 2 | 2 | 0 | 4 | 4 |
| North-Western Zone | 3 | 5 | 0 | 8 | 8 |
| Ajmer | 8 | 10 | 4 | 8 | 11 |
| Ghaziabad | 3 | 7 | 3 | 0 | 0 |
| Varanasi | 2 | 4 | 0 | 0 | 0 |
| Northern Zone | 13 | 21 | 7 | 8 | 11 |
| Hyderabad I | 1 | 1 | 0 | 2 | 2 |
| Hyderabad II | 3 | 3 | 0 | 0 | 0 |
| South-Central Zone | 4 | 4 | 0 | 2 | 2 |
| Bhubaneswar | 1 | 1 | 0 | 1 | 1 |
| Chaibasa | 3 | 3 | 0 | 6 | 6 |
| Ranchi | 1 | 1 | 0 | 0 | 0 |
| South-Eastern Zone | 5 | 5 | 0 | 7 | 7 |
| Bangluru | 5 | 9 | 4 | 0 | 0 |
| Bellary | 3 | 3 | 1 | 7 | 7 |
| Chennai | 1 | 1 | 0 | 1 | 2 |
| Southern Zone | 9 | 13 | 5 | 8 | 9 |
| Bilaspur | 0 | 0 | 0 | 6 | 6 |
| Nagpur I | 2 | 2 | 1 | 5 | 5 |
| Nagpur II | 0 | 0 | 0 | 1 | 1 |
| Western Zone | 2 | 2 | 1 | 12 | 12 |
| ALL INDIA | 40 | 54 | 13 | 48 | 52 |

STATEMENT 9.6**Fatal accidents in non-coal mines by cause and responsibility in 2022**

| Responsibility / Major Cause Group | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Total |
|-------------------------------------|----|---|---|---|---|---|---|----|---|-------|
| Management | 6 | 0 | 1 | 1 | 1 | 0 | 0 | 6 | 3 | 18 |
| Management & Sub. Sup. Staff (SSS) | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 5 | 1 | 11 |
| Management, SSS & Deceased | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Management & Deceased | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Management & Contractor's Worker | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 3 |
| Subordinate Supervisory Staff (SSS) | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Sub.Sup.Staff & Others | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Others | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 13 | 2 | 7 | 1 | 1 | 0 | 0 | 12 | 4 | 40 |

Summary of Findings of Fatal Accidents in Non-Coal mines during the year 2022

Code : 0111 Fall of Roof
(2 Deaths)

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

Mine - DADAM STONE MINE
Owner - M/S HSIIDC LTD.
Dist. - Bhiwani, State - Haryana
Person(s) Killed :

1. Tufan Sharma, Contractor Worker, Male, 39
2. Dinesh Dutt, Contractor Worker, Male, 26
3. Sanjay, Contractor Worker, Male, 30 Years
4. Binder, Contractor Worker, Male, 30 Years
5. Dharambir, Dumper Operator, Male, 52 Years

While contractor workers and consumer employees were deployed at the bed of quarry of an opencast stone mine having high and almost vertical single bench on eastern and western side, suddenly a huge rock mass of size measuring about 28m(L) x 8-10m(W) x 30m(Height) parted from western side from a height of about 10 to 40m and buried the men and machineries deployed at the quarry floor that resulted into death of five workers almost on the spot and serious injuries to three workers."

i) the sides of an excavation been adequately benched, sloped and kept secured to prevent the danger of fall of side, as required under the provisions of the Regulation 106(3) of the Metalliferous Mines Regulations, 1961 read with condition no.2.1(b)&(c) of permission issued vide this Directorate's letter no.516936/NZ/Ghaziabad Region/Perm/2021/9178/1393 dated 17.06.2021,

ii) the loose stones and debris not been allowed to remain within a distance of 3m from the top edge of the excavation, as required under the provisions of the Regulation 106(4) of the Metalliferous Mines Regulations, 1961,

iii) the adequate number of Mining Mate and Mine foreman been appointed in pit no.37 & 38 in first shift for thorough supervision and to hold the charge of different pits in the mine respectively as required under Regulation 39 (1)(a) read with Regulation 116 and Regulation 37(1) of the Metalliferous Mines Regulations, 1961 and

iv) the workings of pit no. 37 & 38 been thoroughly inspected, the subordinate officials and competent persons carried out their duties in proper manner, all the persons from dangerous place been withdrawn & the dangerous place been adequately fenced off as required under Regulation 46(1)(c), (2)(a), (7), 47(1)(b) & 45(1) & (2) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

Mine - PALLAVA GRANITE MINE
Owner - PALLAVA GRANITES INDUS.(INDIA) (P) LTD.
Dist. - Prakasham, State - Andhra Pradesh

Person(s) Killed :

1. Karnamu S.Reddy, Wire Saw Operator, Male, 26

Years

While one wire saw operator was removing a wedge inserted at the toe of the bench of an opencast Granite Mine, a mass of stone measuring about 1.2m (Length) x 1.0m (Width) x 3m (Thick) separating from the side of the bench fell down from a height of about 4m inflicting injuries to him, to which he succumbed on the way to surface of the Mine.

Had,

adequate precautions been taken by dressing the sides of the benches to ensure safety of the persons employed within 5m of the face as required under Condition no,6.3 of Annexure-106A of the permission letter no.HR.2/SCZ/106(2) (b)/163/(18)/2018/1940-43 dated 23.04.2018 granted under the Regulation 106(2) (b) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

5. Date - 18.01.22
Time - 8.30

Mine - KHO MARBLE MINE ML NO 67/97
Owner - YATISH KUMAR GUPTA
Dist. - Alwar, State - Rajasthan
Person(s) Killed :

1. Madan Lal Meena,Dumper Operator, Male, 40

Years

While one buyer's dumper carrying marble from bottom of an opencast marble mine and was on haul road formed at the quarry bottom, suddenly a huge rock mass of size measuring about 30-35m(L) x 10-12m(W) x 12-15m(H) fell down and it's disintegrated boulders and debris out spread on the quarry floor, haul road thus burying the travelling dumper beneath, resulting into instantaneous death of dumper operator."

Had,

(i) side of the mine been adequately benched, sloped and kept secured to prevent the danger of fall of side, as required under the provisions of the Regulation 106(3) of the Metalliferous Mines Regulations, 1961,

(ii) loose stones and debris not been allowed to remain within a distance of 3m from the top edge of the 30m to 35m high bench, as required under the provisions of the Regulation 106(4) of the Metalliferous Mines Regulations, 1961,

(iii) a duly qualified manager been appointed in the mine for overall management, control, supervision and direction of the mine, as required under Regulation 34 of the Metalliferous Mines Regulations, 1961 read with Sections 17, 18(1)&(4) of the Mine Act 1952 and

(iv) the mine workings been placed under the charge of a Mining Mate or other competent persons for adequate inspection and thorough supervisions of the mine, as required under the provisions of Regulation 39 read with Regulation 116 of the Metalliferous Mines Regulations, 1961,

(v) the mine not been worked in contravention of prohibitory issued under section 22A(2) of the Mines Act, 1952.

this accident could have been averted.

6. Date - 04.03.22 Mine - MADAHALLI STONE MINE
 Time - 11.30 Owner - SHRI MAHENDRAPPA
 Dist. - Chamarajanagar, State - Karnataka
 Person(s) Killed :
 1. Sarfaroj, Helper, Male, 18 Years
 2. Ajmullah, Operator, Male, 25 Years
 3. Miraj, Operator, Male, 25 Years

While six persons (excavator operators and helpers) were engaged at the bottom of 40m high bench in a opencast mine, suddenly the side of the bench, measuring about 40(m) * 5m (width)*35m (height), dislodged burying three of them, including two deployed excavators and one rock breaker, inflicting fatal injury while other three persons got seriously injured.

Had,

i) a duly qualified manager has been appointed at the mine for the overall management, control, supervision and direction, as required under the provisions of Section 17 of the Mines Act, 1952, read with Regulation 34 (1)(a) of the Metalliferous Mines Regulations, 1961;

ii) statutory supervision has been ensured so as to confirm that all works in the mine were being done in accordance with the provisions of the Mines Act, 1952 and of the Regulations framed thereunder, as required under the provisions of Regulation 37(1) (a) and Regulation 116(1) of the Metalliferous Mines Regulations, 1961;

iii) the person's employed in the mine been imparted vocational training as required under Rule 6 of the Mines Vocational Training Rules, 1966;

iv) the opencast workings have been kept adequately benched, slopped and secured, as required under the provisions of Regulation 106(2)(a) of the Metalliferous Mines Regulations, 1961.

this accident could have been averted.

7. Date - 14.05.22 Mine - REWAT DUNGRI RANGE MARBLE MINE NO.29
 Time - 15.30 Owner - NAZMA MARBLE LTD
 Dist. - Nagaur, State - Rajasthan
 Person(s) Killed :
 1. Pappu Ram, Mazdoor, Male, 45 Years
 2. Nanda Ram, Mazdoor, Male, 53 Years

While two persons taking lunch in an opencast marble mine, suddenly a stone layer of about 10m long, 3m wide and 0.1m thick got separated from sides of the highwall bench and fall down on both of them from a height of about 30m, inflicting serious bodily injuries to both of them and succumbed instantaneously."

Had,

(i) the prohibitory order imposed in the mine vide this Directorate's letter No. AJ/ Nagaur/ 22(3) / 2004 / 1985 dated 28.06.2004 under Section 22(3) of the Mines Act, 1952 not been violated;

(ii) a duly qualified person having prescribed qualifications been appointed as manager of the mine for overall management, control, supervision and direction of the

mine, as required under the provisions of the Regulation 34(1)(a) of the Metalliferous Mines Regulations, 1961 read with Section 17(1) of the Mines Act, 1952;

(iii) foreman and mining mates been appointed at the mine to hold general charge & thorough supervision for the various operations being carried out in the mine, as required under the provisions of Regulations 37(1)(a) & 39(1)(a) of the Metalliferous Mines Regulations, 1961;

(iv) the sides of highwall bench been made and kept secured by proper dressing of loose stones before allowing work persons in the mine, thus not negligently endangering the safety of work persons employed in the mine, as required under the provisions of the Regulation 112 (1) read with regulation 181 of the Metalliferous Mines Regulations, 1961 and Section 18(4) of the Mines Act, 1952; and

(v) Work persons not been deployed in the mine without imparting vocational training as required under the provisions of the of the Rule 6(1) of Mine Vocational Training Rule, 1966;

this accident could have been averted.

8. Date - 02.07.22
Time - 22.30

Mine - RELA MASONRY STONE MINE ML 384/2010

Owner - M/S STERLING STONE

Dist. - Ajmer, State - Rajasthan

Person(s) Killed :

1. Subhash, Camper Driver, Male, 36 Years
2. Ravi, Tipper Operator, Male, 24 Years

While an excavator was loading a tipper in an opencast masonry stone mine beyond daylight hours, suddenly top and middle portion of the 71m high and almost vertical high wall side of the bench failed and completely buried the empty tipper and camper parked nearby along with their drivers underneath about 200m [^] 3 fallen material, one of whom was recovered dead after half an hour and other after about five and half hours.

Had,

(i) the high wall side of a quarry on south side about 71m in height and almost vertical been adequately benched, sloped or secured so as to prevent danger from fall of sides as required under the provisions of Regulation 106(3) of the Metalliferous Mines Regulations, 1961;

(ii) a duly qualified person having prescribed qualifications been appointed as manager of the mine for overall management, control, supervision and direction of the mine, as required under the provisions of Regulation 34(1)(a) of the Metalliferous Mines Regulations, 1961 read with Section 17(1) of the Mines Act, 1952;

(iii) foreman and mining mates been appointed at the mine to hold general charge & thorough supervision for the various operations being carried out in the mine as required under the provisions of Regulations 37(1)(a) & 39(1)(a) of the Metalliferous Mines Regulations, 1961;

(iv) the working place and high wall of the bench been carefully examined for safety before commencing work as required under the provision of Regulations 118(3) of the Metalliferous Mines Regulations, 1961 read with Section 18(4) of the Mines Act, 1952;

(v) adequate general lighting arrangement been provided in opencast working of a mine as required under the provisions of Regulation 146(1)(a) of the Metalliferous Mines Regulations, 1961 read with DGMS (Legis) Cir. 03/2017, dated: 06.11.2017; and

(vi) work persons not been deployed in the mine without imparting vocational training as required under the provision of Rule 6(1) of the Mine Vocational Training Rule, 1966;

this accident could have been averted.

| | | |
|----|---------------------------------|---|
| 9. | Date - 24.07.22 Time - 16.00 | Mine - BILLI MARKUNDI STONE MINE (S.N.7536) Owner - SHRI ASHOK KUMAR SINGH Dist. - Sonbhadra, State - Uttar Pradesh Person(s) Killed : 1. S.Kumar, Operator, Male, 21 Years 2. R.S.Yadav, Helper, Male, 29 Years |
|----|---------------------------------|---|

While a backhoe machine was cutting soft overburden from the side of a highwall in an Opencast Stone Mine by standing adjacent to it, suddenly a side measuring about 46.316 m³ fell from a height of about 15.7 m on the backhoe machine, in which the backhoe operator and his helper present inside the cabin were buried and trapped, who were later recovered dead about 3 hours after the accident.

Had,

(i) the machine not been deployed at the bottom of high bench having soft overburden without adequately benched, sloped or secured so as to prevent danger from fall of sides, thus negligently not endangered safety of the persons employed therein, as required under Regulation 106(3) read with Regulation 181 of the Metalliferous Mines Regulations, 1961;

(ii) the entrances leading to the bottom of the high bench of an old excavation in the mine, which was dangerous, been provided with a fence, barrier or gate so designed and constructed as to prevent inadvertent entry of any person or machinery, as required under Regulation 115(4)&(5) read with Regulation 46(7) of the Metalliferous Mines Regulations, 1961 and Section 18(4) of the Mines Act, 1952;

(iii) the mining operations not been carried out in the mine without thorough supervision, as required under Regulation 39(1) of the Metalliferous Mines Regulations, 1961; and

(iv) work persons not been deployed in the mine without imparting vocational training as required under the provisions of the of the Rule 6(1) of Mine Vocational Training Rule, 1966;

this accident could have been averted.

| | | |
|-----|---------------------------------|---|
| 10. | Date - 08.10.22 Time - 16.20 | Mine - BARDAG STONE MINE Owner - PRAVEEN KUMAR AGARWAL Dist. - Palamau, State - Jharkhand Person(s) Killed : 1. L.Bhuiya, Driller, Male, 23 Years |
|-----|---------------------------------|---|

While a driller with two helpers were drilling hole on the floor of the high-wall of a stone quarry, loose boulders embedded and hanging on the high-wall fell from a height

of 20.0m on one of the driller, inflicting serious bodily injuries, to which he succumbed whilst on way to the hospital"

had,

Had the sides of opencast workings been benched and kept sloped and secured, and kept dressed of all loose stones/boulders, as to prevent fall of boulders as required by the provisions of Regulation 106 of the Metalliferous Mines Regulations, 1961 and helmet been worn by the drillers as required under Regulation 182A of Metalliferous Mines Regulations, 1961,

this accident could have been averted.

| | |
|---------------------|--|
| 11. Date - 19.10.22 | Mine - BALAGHAT MANGANESE MINE |
| Time - 3.25 | Owner - MANGANESE ORE [INDIA] LTD. |
| | Dist. - Balaghat, State - Madhya Pradesh |
| | Person(s) Killed : |
| | 1. H.Meshram, Worker, Male, 51 Years |

While a worker was returning back after manually unloading ore into the ore-pass in a stope of an underground metalliferous mine, suddenly a mass of phyllitic clay measuring about 20cm X 15cm X 10cm fell from the roof near the ore pass, from a height of about 3.0m, inflicting serious bodily injuries, to which he succumbed after two days while undergoing treatment at hospital."

had,

(i) roof been made and kept secured by proper dressing in accordance with the clause 1 of the Regulation 112 of the Metalliferous Mines Regulations 1961;

(ii) workmen been made to obey the orders issued by the mine mate and the foreman as required under Regulation 41(1) (a) of the Metalliferous Mines Regulations 1961

this accident could have been averted.

| | |
|---------------------|--|
| 12. Date - 23.12.22 | Mine - PUSHPA R. BHATI LIME STONE MINE |
| Time - 18.13 | Owner - M/S Pushpaben R Bhati |
| | Dist. - Kutch, State - Gujarat |
| | Person(s) Killed : |
| | 1. Ashok Kr. Patel, Worker, Male, 42 Years |
| | 2. Gayanendra Pd., Worker, Male, 38 Years |
| | 3. Jay Singh, Worker, Male, 15 Years |

While three persons were working at the bottom of the highwall bench of about 35m height in an opencast mine, suddenly a portion of the side of the highwall measuring about 35m in height, 35 meter in length and 5 to 7m thick slid down at the bottom of the mine and buried the three persons inflicting serious bodily injuries to them to which they succumbed on the spot.

Had,

a manager been appointed for the overall management, control, supervision and direction of the mine and competent persons, including officials, been appointed to assist the manager in securing thorough supervision of all operations in the mine and enforcement of the requirements of the Act, Regulations and Orders made thereunder as required under Section 17 (1) and Section 18(1) & (4) of the Mines Act 1952 read with Regulation 34, and Regulation 39 of the Metalliferous Mines Regulations, 1961, which in turn would have ensured that :

i. Sides of the mine adequately benched, sloped or secured to prevent the danger from the fall of the sides, and

ii. No person shall undercut the side of the highwall benches as to cause any overhangs, as required under the Regulations 106(3) & (5) of the Metalliferous Mines Regulations, 1961;

this accident could have been averted.

13. Date - 26.12.22
Time - 11.00

Mine - BISALVADI STONE MINE
Owner - RENUKA DEVI
Dist. - Chamarajanagar, State - Karnataka
Person(s) Killed :
1. Kumara, Driller, Male, 33 Years
2. Siddaraju, Driller, Male, 30 Years
3. Shiva Raju KM, Driller, Male, 29 Years

While a crew of three workmen were engaged for drilling work on 50m highwall in an opencast metal mine, at a place about 8m above floor of the mine, suddenly a rockmass measuring about 9m length x 6m width x 3m thickness was dislodged from the highwall inflicting fatal injuries to two workmen and the other succumbed on way to the hospital.

Had,

(i) the duly qualified manager been appointed at the mine for the overall management, control, supervision and direction, as required under the provision of Section 17 of the Mines Act, 1952, read with Regulation 34(1)(a) of the Metalliferous Mines Regulations, 1961;

(ii) statutory supervision been ensured so as to confirm that all works in the mine were being done in accordance with the provision of the mines Act, 1952 and of the Regulation framed thereunder, as required under the provision of Regulation 37(1)(a) and Regulation 116(1) of the Metalliferous Mine Regulations 1961;

(iii) the persons employed in the mine been imparted vocational training as required under Rule 6 of the Mines Vocational Training Rules, 1966, and;

(iv) the opencast workings been kept adequately benched, sloped and secured, as required under the provision of Regulation 106(1) & (2) of the Metalliferous Mines Regulations, 1961.

this accident could have been averted.

Code : 0200 Transportation Machinery(Winding)

Code : 0224 Falls of Objects from Cages, Skip etc.
(1 Death)

14. Date - 12.04.22 Mine - ZAWAR MALA GALENA & SPHLTE
Time - 17.26 Owner - HINDUSTAN ZINC LTD.
Dist. - Udaipur, State - Rajasthan
Person(s) Killed :
1. S. Kumawat, Supervisor, Male, 33 Years

While an electrical supervisor along with bellman was entering into man winding cage at shaft inset of a Metalliferous underground mine, suddenly a piece of rock of size 13cmx9cmx8cm fell from the loaded skip of parallel running material winder in the same shaft from height of 196 metres that passed through the gap between protective roofing or pent-house and top of cage and hit the electrical supervisor inflicting serious head injuries after tearing his helmet to which he succumbed on the way to hospital after about one hour and thirty minutes, while the bellman escaped unhurt."

Had,

(i) the gap between the protective roofing or pent-house and the top of cage when the cage is at landing level not been exceeded 15 centimetres to prevent fall of spilled material or rock pieces at landing levels as required under the provisions of Regulation 83(4) of Metalliferous Mines Regulations, 1961;

(ii) the material man winders not been operated simultaneously and suitable interlocking devices been provided to ensure it, thus not negligently endangering the life of persons travelling in cage compartment as required under provisions of Regulation 181 of Metalliferous Mines Regulations, 1961 read with Standard operating procedure framed by the manager vide No. HZL/ZM/ZMM/SOP 16 dated 28/09/2021;

this accident could have been averted.

Code : 0229 Other Accident due to Winding Operation
(1 Death)

15. Date - 05.03.22 Mine - KOLIHAN COPPER MINE
Time - 21.30 Owner - HINDUSTAN COPPER LTD.
Dist. - Jhunjhunu, State - Rajasthan
Person(s) Killed :
1. Sita Ram Jaidia, Mazdoor, Male, 50 Years

While a maintenance crew was changing winding rope of Koepe Winder shaft from 184 MRL shaft inset in an underground copper mine, a rope clamp got stuck in beam just above the shaft inset and it's sudden release resulted into high jerk in loose new rope being hoisted that hit to one of crew member inflicting serious injuries to him to which he succumbed on the spot and one of the other members got serious bodily injury."

Had,

the replacement of winding rope been carried out properly by the subordinate official appointed for the purpose thus negligently not omitted to ensure safety of persons as required under the provision of Regulation 181 read with Regulation 53(d) of the Metalliferous Mines Regulations, 1961,

the engineer himself been present throughout during changing of winding rope thus negligently not omitted to ensure safety of persons as required under the provision of Regulation 181 read with Regulation 53(c) of the Metalliferous Mines Regulations, 1961 and,

the safety management plan been reviewed and code of practice for changing of skip main rope revised thus not negligently omitted to ensure safety of persons as required under the provision of Regulation 181 of Metalliferous Mines Regulations, 1961 read with DGMS (Tech.) (S&T) circular 05/2016;

this accident could have been averted.

Code : 0300 Transportation Machinery (Non-Winding)

Code : 0332 Rope Haulage
(1 Death)

16. Date - 21.06.22 Mine - KRISTIPADU DOLOMITE & STEATITE MINE
Time - 17.00 Owner - MAHAVEER MINERALS
Dist. - Anantpur, State - Andhra Pradesh
Person(s) Killed :
1. G.Ramusuri, UG worker, Male, 44 Years

While a worker was riding on an ascending loaded tub of an underground metalliferous mine, suddenly the tub derailed and hit the person (who fell after derailment) causing serious injury, which proved fatal in hospital after one and half hour".

had,

(i) set riding been prevented as required under Regulation 44(1)(a), Regulation 97(3) and Regulation 181 of the Metalliferous Mines Regulations, 1961,

(ii) instructions given by management in writing on the issue of set riding been followed thereby negligently or wilfully not endangered the life of person as required under Regulation 41(1)(a), Regulation 97(3) and Regulation 181 of the Metalliferous Mines Regulations, 1961

this accident could have been averted.

Code : 0335 Dumpers
(3 Deaths)

17. Date - 20.01.22
Time - 7.00

Mine - DONIMALAI IRON ORE MINE
Owner - NATIONAL MINERAL DEV. CORPN. LTD.
Dist. - Bellary, State - Karnataka
Person(s) Killed :

1. T.M.Koteppa, Contractor Employee, Male, 28

Years

While a tipper was moving forward after just unloading overburden in dump yard of a mechanised opencast iron ore mine, suddenly it hit a person (came from weighbridge to dump yard) from the front and run over by left side rear wheel of the tipper inflicting fatal injuries instantaneously."

Had,

1.) the person working at weigh bridge not left his place of working and went to the dump yard as required under provision of the Regulation 181 of the Metalliferous Mines Regulations, 1961;

2.) the tipper driver not driven his tripper negligently thus endangering life of the person as required under provision of the Regulation 181 of the Metalliferous Mines Regulations, 1961;

3.) the traffic rules and code of practice for the respective jobs been implemented properly as required under provision of the Regulation 181, Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961 read with clause 25.6 of letter No.BLR-BL/IO-12/P-106/2019/380, dated 18.02.2019, and read with Section 18(4) of the Mines Act, 1952;

this accident could have been averted.

18. Date - 01.02.22
Time - 8.00

Mine - GANDHAMARDAN IRON ORE MINE
Owner - ORISSA MINING CORPN. LTD.
Dist. - Keonjhar, State - Orissa
Person(s) Killed :

1. K.P.Rao, Operator, Male, 48 Years

While an excavator was being shifted on a trailer in an opencast metalliferous mine and the excavator operator traveling on board went down from the trailer to communicate with the driver of a bus coming from behind, suddenly a loaded tipper coming from the opposite direction rammed in between the trailer & the bus and ran over the operator inflicting fatal injuries on the spot.

Had,

(i) tipper been driven carefully, defensively, kept under control at all times, and adequate clearance been ensured by its driver while passing the trailer and the bus as required under Clause 12.0 (C) (II) (b) & Clause 12.0 (C) (II) (c) of the Annexure 'A' and Rule 5(1) of the Code of Traffic Rules framed under Clause No. 10 to permission granted under Regulation 106(2)(b) of the MMR, 1961 vide letter No. 330119/SEZ/Chaibasa Region/Perm/2020/6462 dated 05.10.2020,

(ii) the trailer not been parked unsafely in a position so as not to endanger the other traffic in the mine premises as required under Rule 4(a) of the Code of Traffic Rules framed under Clause No. 10 to permission granted under Regulation 106(2)(b) of the MMR, 1961 vide letter No. 330119/SEZ/Chaibasa Region/Perm/2020/6462 dated 05.10.2020 and

(iii) adequate clearance been ensured by the bus driver before attempting to overtake the parked trailer unless he could see clearly for enough ahead to ensure that he could pass it clearly as required under Clause 12.0 (C) (II) (c) of the Annexure 'A' and Rule 5(f) of the Code of Traffic Rules framed under Clause No. 10 to permission granted under Regulation 106(2) (b) of the MMR, 1961 vide letter No. 330119/SEZ/Chaibasa Region/Perm/2020/6462 dated 05.10.2020,

this accident could have been averted.

| | |
|---------------------|-------------------------------------|
| 19. Date - 08.04.22 | Mine - JODA WEST MANGANESE MINE |
| Time - 22.25 | Owner - TATA IRON & STEEL CO. LTD. |
| | Dist. - Keonjhar, State - Orissa |
| | Person(s) Killed : |
| | 1. S.K.Oram, Helper, Male, 29 Years |

While a tipper was being driven from the parking yard of an opencast metalliferous mine towards the quarry, one mechanical helper went in front of it for pre-start maintenance and was ran over by the tipper inflicting fatal injuries to him on the spot.

Had,

(i) the tipper been driven carefully and its path been ensured free from any obstruction and/ or personnel by its driver before moving it from the parked position as required under Clause No. 12(C) (II) (b) and Rule 4(f) of the Code of Traffic Rules framed under Clause No. 7 to permission granted under Regulation 106(2) (b) of the Metalliferous Mines Regulations, 1961 vide letter No. 300075/2335 dated 29.07.2015 and modified vide letter No. 380075/SEZ/Chaibasa Region/Perm/2019/2615 dated 15.11.2019 and

(ii) the tipper maintenance work been adequately supervised and carried out in safe working condition and thereby not negligently omitting the things necessary for the safety of the mine or persons employed therein as required under Regulation 181 of the MMR 1961 read with Clause No.19(b) to permission granted under Regulation 106(2) (b) of the Metalliferous Mines Regulations, 1961 vide letter No. 300075/2335 dated 29.07.2015 and modified vide letter No. 380075/SEZ/Chaibasa Region/Perm/2019 /2615 dated 15.11.2019,

the accident could have been averted.

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

| | |
|---------------------|---|
| 20. Date - 27.11.22 | Mine - JAMDIHA STONE QUARRY |
| Time - 13.30 | Owner - GANESH STONE INDUSTRIES |
| | Dist. - Koderma, State - Jharkhand |
| | Person(s) Killed : |
| | 1. O.K.Yadav, Tipper operator, Male, 28 Years |

While a Tipper loaded with stone was being driven uphill from the bed of the mine to the surface on a haul road having a gradient of 1 in 9, it suddenly stopped, skidded

backwards then fell down to a depth of about 12 m into a waterlogged area of the mine, resulting in death of the Tipper Operator due to drowning.

Had,

i. no employees been deployed in the mine in compliance of the Order Issued under Section 22(3) of the Mines Act, 1952;

ii. the Tipper been operated by a competent person as required under Regulation 176(1) of the Metalliferous Mines Regulations, 1961;

iii. the owner appointed a competent person to secure running and maintenance of the Tipper in a safe working order as stipulated in Regulation 39(1)(a)(iii) of the Metalliferous Mines Regulations, 1961;

iv. the gradient of the haul road been 1 in 16 or less as stipulated in DGMS (Tech.) Circular No. 09 of 2008, dated 02.12.2008 issued under Regulation 106 of the Metalliferous Mines Regulations, 1961

v. the minimum width of the haul road been three times plus 5 m of the largest vehicle plying on it, as stipulated in DGMS (Tech.) Circular No. 09 of 2008, dated 02.12.2008 issued under Regulation 106 of the Metalliferous Mines Regulations, 1961, and

vi. a parapet wall or berm of adequate dimensions been provided along the edge of the haul road as stipulated in DGMS (Tech.) Circular No. 09 of 2008, dated 02.12.2008 issued under Regulation 106 of the Metalliferous Mines Regulations, 1961;

this accident could have been averted.

21. Date - 09.12.22
Time - 2.50

Mine - CBM BLOCK-RG(EAST)-CBM-2001/1
Owner - ESSAR OIL LIMITED
Dist. - Burdwan, State - West Bengal
Person(s) Killed :

1. Rajesh Kumar, Contractual employee, Male, 20

Years

While right rear outrigger of a crane was being extended and the crane helper was crossing the right rear outrigger got trapped in between rear right outrigger and tool bin inflicting serious bodily injury with fracture to his pubic bones and neck of right femur due to which he succumbed in hospital during treatment.

Had,

(i) the SMP been properly framed and implemented as prescribed under Regulation 23(1)(c) and Reg. 131 of OMR, 2017 read with DGMS Circular 13 of 2003 and DGMS Technical Circular 05 of 2016 thus not negligently omitted to do anything necessary for the safety of persons employed therein as required under the provisions of Regulation 133 of the Oil Mines Regulations, 2017,

(ii) operation been adequately supervised as prescribed under Reg. 27 read with regulation 29 and Regulation 33 of the Oil Mines Regulations, 2017 thus not negligently omitted to do anything necessary for the safety of persons employed therein as required under the provisions of Regulation 133 of the Oil Mines Regulations, 2017 and

(iii) the work been carried out as per SOP framed for onshore crane operation as prescribed under Regulation 115 of the Oil Mines Regulations.

this accident could have been averted.

22. Date - 16.12.22
Time - 11.50

Mine - KALARANGIATTA CHROMITE MINE

Owner - FERRO ALLOYS CORPN. LTD.

Dist. - Jajpur, State - Orissa

Person(s) Killed :

1. Kalandi Charan Sahoo, Diesel Sup., Male, 56

Years

While an empty tipper was moving forward for loading overburden from lower level after filling diesel at a undesignated place and was turned left at a junction of haul road in an opencast mine and ran over right thigh of diesel supervisor, who was at left side of the tipper, supervising diesel browsing operation, he received severe injuries and succumbed to his injuries in hospital later"

had,

the SOP framed for filling of diesel in an empty tipper (tyre mounted machine) at a designated place was followed as required under Regulation 106 of the Metalliferous Mines Regulations, 1961 read with condition no.1 of this directorates exemption letter no. No.BBR-JA/CH- /106(2)(b)/2018/1230 dated 21.05.2018 read with SOP (Doc. No. FACOR-IMS-MINE-OPP-15, dated: 01.11.2021) maintained under Para No.8(5) of directorates permission No.BJA/CH-/P-106(2)(b)/2012/385, dated 07.02.2013 read with Regulation 45(1) of the Metalliferous Mines Regulations, 1961 read with Regulation 53(1)(d) of the Metalliferous Mines Regulations, 1961

this accident could have been averted.

Code : 0400 Machinery Other than Transp. Machinery

Code : 0449 Other Non-Transportation Machinery
(1 Death)

23. Date - 03.09.22
Time - 18.00

Mine - MATESHWARI GRANITE MINE

Owner - KAMLA DEVI

Dist. - Ajmer, State - Rajasthan

Person(s) Killed :

1. K.R.Sharma, Operator, Male, 42 Years

While a Granite block having dimension $9' 6'' \times 8' 4'' \times 3' 4''$ was being lifted by Derrick Crane of 40 Ton capacity, suddenly foundation bolts of one of the anchored structure were broken and the crane fell down to lower bench along with crane operator causing serious bodily injuries to which he succumbed on the spot.

Had,

(i) the foundation bolts of the anchored structure of Derrick Crane been properly maintained to ensure adequate strength and free from defect as required under the provisions of the Regulation 172 of the Metalliferous Mines Regulations, 1961;

(ii) a duly qualified person having prescribed qualifications been appointed as manager of the mine for overall management, control, supervision and direction of the mine, as required under the provisions of the Regulation 34(1)(a) of the Metalliferous Mines Regulations, 1961 read with Section 17(1) of the Mines Act, 1952;

(iii) an Engineer been appointed at the mine to hold general charge of machinery & thorough supervision for the installation, maintenance and safe working of machinery as required under the provisions of Regulations 36(1) of the Metalliferous Mines Regulations, 1961; and

(iv) work persons not been deployed in the mine without imparting vocational training as required under the provisions of the of the Rule 6(1) of Mine Vocational Training Rule, 1966.

this accident could have been averted.

Code : 0500 Explosives

Code : 0559 Other Explosive Accidents
(1 Death)

24. Date - 13.10.22 Mine - ANIMITLAHALLI STONE QUARRY NO. 1022
Time - 18.00 Owner - MANJUNATHA
Dist. - Kolar, State - Karnataka
Person(s) Killed :
1. Rakesh Kumar, Driller, Male, 28 Years

While a crew of five workmen were engaged during rain thunder storming for the drilling and charging of blast holes in an opencast metal mine, suddenly, a detonation occurred, resulting into fatal injuries to one workman, serious bodily injuries to another worker and remaining three escaped unhurt".

had,

(i) the Owner ensured that, workmen were not negligently engaged during rain thunder storming for the drilling and charging of blast holes as required under the provisions of Section 18(4) of the Mines Act, 1952, read with the Regulation 181 of the Metalliferous Mines Regulations, 1961;

(ii) the Owner ensured that, a duly qualified manager & competent persons were appointed at the mine for the overall management, control, supervision and direction, as required under the provisions of Section 17 of the Mines Act, 1952, read with Regulation 34 and Regulation 39 of the Metalliferous Mines Regulations, 1961;

(iii) the Agent ensured that, workmen were not negligently engaged during rain thunder storming for the drilling and charging of blast holes as required under the provisions of Section 18(4) of the Mines Act, 1952, read with the Regulation 181 of the Metalliferous Mines Regulations, 1961;

(iv) the Agent ensured that, a duly qualified manager & competent persons were appointed at the mine for the overall management, control, supervision and direction, as required under the provisions of Section 17 of the Mines Act, 1952, read with Regulation 34 and Regulation 39 of the metalliferous mines Regulations, 1961;

(v) the persons employed in the mine been imparted vocational training as required under Rule 6 of the Mines Vocational Training Rules, 1966;

this accident could have been averted.

Code : 0800 Falls (Other than Falls of Ground)

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

25. Date - 18.02.22 Mine - UTI GOLD MINE
Time - 2.45 Owner - HUTTI GOLD MINES CO. LTD.
Dist. - Raichur, State - Karnataka
Person(s) Killed :
1. Yallappa, UG Worker, Male, 44 Years

While two workmen were engaged in cleaning the blasted muck in a vertical raise at a height of 31.5m from the lower level for fixing the stage platform in an underground metalliferous mine, suddenly one of them fell down to lower level along with muck inflicting serious bodily injury to which he succumbed on the way to hospital while the other got serious injury due to hitting of falling muck".

Had,

adequate precautions been taken while cleaning blasted muck to prevent danger to persons from falling blasted muck as required under Regulation 114(1) of the Metalliferous Mines Regulations, 1961. safety belt or lifeline been used to secure persons while cleaning blasted muck in the vertical raise where there was likelihood of slipping or overbalance as required under Regulation 114(2) of the Metalliferous Mines Regulations, 1961. this accident could have been averted. Fault of Management and Supervisory Officials

26. Date - 14.03.22 Mine - MANAVALAKURICHI ILMENITE MINES
Time - 13.45 Owner - INDIAN RARE EARTHS LTD.
Dist. - Kanyakumari, State - Tamil Nadu
Person(s) Killed :
1. C. Stephen, Contractual Worker, Male, 53
Years

While a person was dismantling the corrugated asbestos sheet laid on the of roof of a mineral godown in an opencast metalliferous mine, he fell down from a height of about 8m, inflicting serious bodily injuries to which he succumbed after about 30 minutes."

Had,

it been ensured that a safety belt was used by the person working at height to prevent injuries due to falling from height thereby wilfully or negligently not endangering the life of the person employed in the mine as required under Regulations 181 & 43(2) of the Metalliferous Mines Regulations, 1961 read with Clause No.4 of Safe Operating Procedure(SOP) and

a safety net of adequate strength was provided immediately below the roof of the godown so that the risk of injuries to the person falling from the roof is eliminated thereby wilfully or negligently not endangering the life of person employed in the mine as required under Regulations 181 & 43(2) of the Metalliferous Mines Regulations, 1961 read with Clause No.8 of Safe Operating Procedure (SOP).

this accident could have been averted.

27. Date - 30.03.22
Time - 7.00

Mine - NAWADA STONE MINE
Owner - SHRI PRAKASH YADAV
Dist. - Koderma, State - Jharkhand
Person(s) Killed :
1. Baijnath Singh, Worker, Male, 32 Years

While work person was cleaning floor of the stone ledge of about 14m (length) x 2-3m (width) x 13m (height) of second stone bench in an opencast stone mine with a rope tying with waist but without anchoring to grounding stone, suddenly, he slipped and fell down on to the floor of the quarry from a height of about 13m, inflicting serious bodily injuries to which he succumbed on the way to mine office after about half an hour.

Had,

i) the work persons not been deployed in the mine for extraction of stone from the ledge of 2nd stone bench in contravention of the order under section 22(3) of the Mines Act, 1952 issued vide this Directorate's letter No.Kod/2322 dated 23.092015.

ii) the work person not been deployed to work on a stone ledge without protecting by the guard rails, fence or ropes suitably fixed to prevent from falling down in contraventions of the Regulation 118(4) of the Metalliferous Mines Regulations,1961;

iii) the mine been placed under the charge of a manager holding prescribed qualifications as to ensure that all work in the mine was carried on in accordance with the provisions of the Mines Act, and of the Regulations, rules, bye laws and order made there-under, as required by the provisions of Section 17(1) of the Mines Act, 1952, read with Regulation 34(1) of the Metalliferous Mines Regulations, 1961 and,

iv) the work person deployed in the mine been imparted vocational training as required under Rule 6 of the Mine Vocational Training Rules, 1966;

this accident could have been averted.

28. Date - 06.05.22
Time - 8.40

Mine - POKARNA GRANITE MINE-I
Owner - POKARNA GRANITE LTD.
Dist. - Prakasham, State - Andhra Pradesh

Person(s) Killed :

1. S.Siva Kumar, Operator, Male, 44 Years

While a crane was lowering one drill machine from the top of a bench of an opencast granite mine, rear tyres of the crane including operator's cabin moved up about one meter (1m) high above the ground resulting crane operator jumping out of the cabin to which he sustained serious bodily injuries and died in the hospital after thirty-six (36) days.

Had,

the crane been placed on level ground and drill machine not been lowered below sitting level of the crane thus not negligently endangering life and safety of own and other workman employed in the mine contravening Regulation 181 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

29. Date - 19.05.22
Time - 10.00

Mine - ULLORI RANGE MARBLE MINE NO. 64A

Owner - HAZZAN JAITUN

Dist. - Nagaur, State - Rajasthan

Person(s) Killed :

1. Shivkaran, Wire Saw Operator, Male, 54 Years

While two work persons were climbing on an iron ladder to reach the top of the marble block of 4m high in an opencast marble mine, suddenly both of them fell down from a height of about 2.5m probably due to slipping of one person and subsequent loosing of balance by other person, inflicting serious bodily injuries to one of them who succumbed on the way to the hospital and other escaped with minor injuries.

Had,

(i) the prohibitory order imposed in the mine vide this Directorate's letter No. AJ / M * ak / 22 * (3) / 6473 dated 30.09.1996 under Section 22(3) of the Mines Act, 1952 not been violated;

(ii) an iron ladder having an inclination of more than 45° from the horizontal been provided with hand rails to ensure safe travel and work persons been safe-guarded by securing with safety belt or life line while climbing on it, thus not negligently endangering their life, as required under the provisions of the Regulation 96(2)(c) and 114(2) read with Regulation 181 of the Metalliferous Mines Regulations, 1961 and Section 18(4) of the Mines Act, 1952;

(iii) a duly qualified person having prescribed qualifications been appointed as manager of the mine for overall management, control, supervision and direction of the mine, as required under the provisions of the Regulation 34(1)(a) of the Metalliferous Mines Regulations, 1961 read with Section 17(1) of the Mines Act, 1952;

(iv) foreman and mining mates been appointed at the mine to hold general charge & thorough supervision for the various operations being carried out in the mine, as required under the provisions of Regulations 37(1)(a) & 39(1)(a) of the Metalliferous Mines Regulations, 1961; and

(v) Work persons not been deployed in the mine without imparting vocational training as required under the provisions of the of the Rule 6(1) of Mine Vocational Training Rule, 1966;

this accident could have been averted.

30. Date - 25.06.22 Mine - REWAT DUNGRI RANGE MARBLE MINE NO.26
 Time - 17.30 Owner - M/S DIAMOND MARBLE WORKS
 Dist. - Nagaur, State - Rajasthan
 Person(s) Killed :
 1. M.R.Jat, Operatr, Male, 35 Years

While two work persons were working on a top of marble bench of an opencast marble mine, suddenly both of them got slipped due to inclined watery surface and fell down on the floor from a height of about 6m, causing fatal injury to one work person and serious bodily injury to another one.

Had,

(1) the prohibitory order imposed in the mine vide this Directorate's letter No. AJR/DMS/ Makrana/ 2014/ 16605, dated: 05.12.2014 under Section 22(3) of the Mines Act, 1952 not been violated;

(ii) a duly qualified person having prescribed qualifications been appointed as manager of the mine for overall management, control, supervision and direction of the mine, as required under the provisions of the Regulation 34(1)(a) of the Metalliferous Mines Regulations, 1961 read with Section 17(1) of the Mines Act, 1952;

(iii) foreman and mining mates been appointed at the mine to hold general charge & thorough supervision for the various operations being carried out in the mine as required under the provisions of Regulations 37(1)(a) & 39(1)(a) of the Metalliferous Mines Regulations, 1961;

(iv) work persons not been allowed to work on inclined watery surface of 6m high marble bench without securing by safety belt thus not negligently omitting to ensure the safety of work persons as required under the provisions of Regulation 181 of the Metalliferous Mines Regulations, 1961 read with Section 18(4) of the Mines Act, 1952; and

(v) work persons not been deployed in the mine without imparting vocational training as required under the provision of Rule 6(1) of the Mine Vocational Training Rule, 1966;

this accident could have been averted.

31. Date - 16.07.22 Mine - BILLI MARKUNDI STONE MINE (AN-4920,4921
 Time - 14.05 Owner - RAMESH CHANDRA VAISHYA
 Dist. - Sonebhadra, State - Uttar Pradesh
 Person(s) Killed :
 1. R.Kumar, Mazdoor, Male, 30 Years
 2. R.Bahal, Mazdoor, Male, 21 Years

While two mazdoors were dressing side of a highwall about 67m high after blasting by standing on a ledge tied with rope anchored with an iron rod fixed on top of an opencast dolo stone mine, suddenly the ledge collapsed and the rope's knot anchored to the rod got dislodged causing both of them to fall down from a height of about 15.94m on to the blasted rock pile at the quarry floor, inflicting multiple serious bodily injuries to both of them, to which one mazdoor succumbed on the way to hospital after about 2 hrs and other during treatment in hospitals after about 17 hrs.

Had,

(1) a person having prescribed qualifications been appointed as manager for overall management, control, supervision and direction of the mine and all mining operation been stopped till such appointment, as required under the provisions of the Section 17(1) of Mines Act, 1952 and Regulation 34(1)(a) of the Metalliferous Mines Regulations, 1961 read with this Directorate's letter No. S-29025/154//2022/Sonebhadra/800, dated 20.05.2022;

(ii) the employment of persons not been done and work in the mine not been continued in contravention of the Prohibitory Order issued under Section 22(3) of the Mines Act, 1952, vide this Directorate's letter No. S-29013/((/154/2019-20/Sonebhadra /787, dated 09.04.2019;

(iii) the persons deployed on ledges from which they were likely to fall more than 1.8m been protected by rope suitably fixed to prevent them from falling, thus negligently not endangered their lives, as required under Regulation 118(4) read with Regulation 181 of the Metalliferous Mines Regulations, 1961,

(iv) the sides of an excavation been adequately benched, sloped or secured to prevent danger from fall of sides and work persons not been deployed at the bottom of such high bench, as required under the provisions of the Regulation 106(3) read with the Prohibitory Order issued under Section 22(3) of the Mines Act, 1952, vide this Directorate's letter No. S-29013/()/154/2019-20/Sonebhadra/787, dated 09.04.2019 and Section 18(4) of the Mines Act, 1952,

(v) work persons not been deployed in the mine without imparting vocational training as required under the provisions of the of the Rule 6(1) of the Mines Vocational Training Rules, 1966;

this accident could have been averted.

32. Date - 22.09.22
Time - 9.30

Mine - AKSHAYA M.SAND & STONE CRUSHER
Owner - G.SRINIVASA MITHRA
Dist. - Tumkur, State - Karnataka
Person(s) Killed :
1. Eranna, Driller, Male, 41 Years

While a driller was engaged through a contractor on the top edge of a highwall of height about 90m -100m for a length of about 150m of an opencast mine for fencing work, he somehow stepped onto a slippery surface, lost balance and fell down to the floor of the mine, resulting into serious bodily injuries to which he succumbed almost instantly.

Had,

(i) it been ensured and protected on scaffold or rope suitably fixed and sufficiently strong to prevent from falling as required under Section 18(4) of the Mines Act, 1952 read with Regulation 118(4) of the Metalliferous Mines Regulations, 1961, and

(ii) the job been supervised and ensured that, the work was carried out as required under Regulation 44 of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

33. Date - 13.12.22

Mine - BLACK GRANITES

Time - 16.30

Owner - M V S P KUMARI

Dist. - Guntur, State - Andhra Pradesh

Person(s) Killed :

1. CH Raju, Supervisor, Male, 22 Years

While one workman, standing on the top of a bench was guiding movement of an excavator placed on the same bench of an opencast granite mine, part of the bench measuring size of about 10.6m (Length) x 0.5m to 2.3m (width) x 4.5m (height) where workman was standing collapsed causing workman to fall down to the bottom of the bench through a depth of 7m, partially bury him under loose fallen material and inflicted serious bodily injuries to him to which he succumbed on the way to the hospital.

had,

(i) the workman working been provided with rope suitably fixed and sufficiently strong (safety belt) to prevent him from falling as required under Regulation 118(4) of the Metalliferous Mines Regulations, 1961, and

(ii) competent person been present during work of dressing of sides to take care of that dangerous dressing operation as required under Regulation 47(5)(b) of the Metalliferous Mines Regulations, 1961,

this accident could have been averted.

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

34. Date - 05.09.22
Time - 9.30

Mine - DHAVLI SEPATPURA MASONRY STONE MINE

Owner - BHURALAL MEENA

Dist. - Jaipur, State - Rajasthan

Person(s) Killed :

1. Suraj Jat, Manual Loader, Male, 42 Years

While a work person was carrying a stone piece of size 0.6m * 0.6m * 0.15m to load on a tractor trolley in an opencast masonry stone mine, suddenly he slipped and fell down on the same floor along with the stone piece that strike to his head causing serious injury to which he succumbed almost instantly on the spot.

Had,

(i) the prohibitory order Imposed in the mine vide this Directorate's letter No. AJ/ND/22 (3) /ML No. 105-94/2009/4946, Dated 15.09.2009 under Section 22(3) of the Mines Act 1952, not been violated;

(ii) the work-persons not been deployed to carry stone pieces on the floor of the bench with loose stones having risk of slipping thus not negligently endangering their life in contravention of the provisions of the Regulation 181 of the Metalliferous Mines Regulations, 1961 read with Section 18(4) of the Mines Act, 1952;

(iii) the work persons not been allowed to work in the mine without wearing protective footwear and helmet as required under the provisions of the Regulations 182(1) and 182A(1) of the Metalliferous Mines Regulations, 1961;

(iv) a duly qualified person having prescribed qualifications been appointed as manager of the mine for overall management, control, supervision and direction of the mine, as required under the provisions of the Regulation 34(1)(a) of the Metalliferous Mines Regulations, 1961 read with Section 17(1) of the Mines Act, 1952;

(v) foreman and mining mates been appointed at the mine to hold general charge & thorough supervision for the various operations being carried out in the mine, as required under the provisions of Regulations 37(1)(a) & 39(1)(a) of the Metalliferous Mines Regulations, 1961; and

(vi) Work persons not been deployed in the mine without imparting vocational training as required under the provisions of the Rule 6(1) of Mine Vocational Training Rule, 1966.

this accident could have been averted.

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

35. Date - 24.05.22 Mine - DHOULET STONE MINE ML 393/05
Time - 8.30 Owner - DHOULET STONES
Dist. - Bharatpur, State - Rajasthan
Person(s) Killed :
1. V.Singh, Worker, Male, 30 Years

While a contractor worker deployed as driller helper was cleaning a breakdown drill machine at bed of quarry of an opencast stone mine at a distance of about 05m from the toe of about 40m high bench, suddenly stone pieces parted from the high wall of the bench and hit him on the backside inflicting serious bodily injuries to which he succumbed on way to hospital".

had,

the sides of the workings been adequately benched, sloped and kept secured to prevent the danger of fall of side, as required under the provisions of the Regulation 106(3) of the Metalliferous Mines Regulations, 1961, the workings been thoroughly inspected and the dangerous place been adequately fenced off as required under Regulation 47(1)(b) 5(a) of the Metalliferous Mines Regulations, 1961 and the mine not been worked in contravention of prohibitory order issued vide this Directorates letter no. S29024/GR/Raj/Bharatpur(Pahadi)/0351/order/2743 dated 09.09.2013 under section 22(3) of the Mines Act,1952,

this accident could have been averted.

36. Date - 05.06.22 Mine - ISOLATED DRILLING OIL MINE
Time - 10.55 Owner - OIL & NATURAL GAS CORPORATION LTD.
Dist. - Jorhat, State - Assam
Person(s) Killed :
1. S.J. Pathak, Engineer, Male, 56 Years

While the railing segments of the derrick floor of a drilling rig of an oil mine were being removed with the help of a mobile crane, a segment came out all of sudden to swing abruptly and dragged out a pipe kept on the rig floor, which fell over an official standing below the drilling rig to which he received serious bodily injury and succumbed on the way to the hospital.

Had,

The stopper pipe been removed and not left lying freely over derrick floor where it could cause an accident by falling as required under the provisions of the Regulation 116(6) of the Oil Mines Regulations, 2017 proper supervision been exercised to ensure that rig structure dismantling activities been carried out under the constant and close supervision as required under the provision of the Regulation 29(a), Regulation 29(i) and Regulation 33(1) of the oil Mines Regulations, 2017

this accident could have been averted.

Code : 0900 Other Causes

Code : 0992 Flying Pieces(Except due to Explosives)
(2 Deaths)

37. Date - 12.02.22 Mine - KANNUR CRUSHERS AND SAND MAKING INDUSTRY
Time - 12.00 Owner - MUHAMMAD HAJI MOOLAYIL
Dist. - Kannur, State - Kerala
Person(s) Killed :
1. Ratish, Driller, Male, 35 Years

While two drillers were drilling holes on a bench of an opencast metalliferous mine, suddenly a boulder measuring 1.2m(Length) x 0.82m(width) x 0.7m(height) rolled down from upper bench and fell over a driller, resulting serious bodily injury which proved fatal after half an hour in hospital.

Had,

i) a duly qualified manager has been appointed at the mine for the overall management, control, supervision and direction, as required under the provisions of Section 17 of the Mines Act, 1952, read with Regulation 34(1)(a) of the Metalliferous Mines Regulations, 1961;

ii) statutory supervision has been ensured so as to confirm that all works in the mine were being done in accordance with the provisions of the Mines Act, 1952 and of the Regulations framed thereunder, as required under the provisions of Regulation 37(1)(a) and Regulation 116(1) of the Metalliferous Mines Regulations, 1961;

iii) the persons employed in the mine been imparted vocational training as required under Rule 6 of the Mines Vocational Training rules, 1966; and

iv) the berms of adequate size were not provided on the edge of the bench, thereby not negligently or willfully endangering the life of a person, as required under the provision of Regulation 181 read with Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961.

this accident could have been averted.

38. Date - 01.05.22 Mine - PLOT NO 41 CHAK DUNGRI
 Time - 14.30 Owner - GAFFAR CHAND MOHD. & OTHERS
 Dist. - Nagaur, State - Rajasthan
 Person(s) Killed :
 1. Pappuram, Saw Optr., Male, 35 Years

While three work persons were tightening the rope during raising of a marble block by crane in an opencast marble mine, suddenly knot of the rope tied to marble block opened, the marble block fell down on the floor from a height of about 1.0m, a piece of about 30cm long* 15cm wide* 15cm thick got separated from marble block and thrown away that strike to one of the work person inflicting serious bodily injuries to which he succumbed next day in the hospital.

Had,

(i) the duly prohibitory order imposed in the mine vide this Directorate's letter No. AJ/mak/22(3)/6373 dated 30.09,1996 under Section 22(3) of the Mines Act, 1952 not been violated;

(ii) a duly qualified person having prescribed qualifications been appointed as manager of the mine for overall management, control, supervision and direction of the mine, as required under the provisions of the Regulation 34(1) (a) of the Metalliferous Mines Regulations,1961 read with Section 17(1) of the Mines Act, 1952;

(iii) foreman and mining mates been appointed at the mine to hold general charge & thorough supervision for the various operations being carried out in the mine, as required under the provisions if Regulations 37(1) (a) & 39(1) (a) of the Metalliferous Mines Regulations, 1961;

(iv) work persons not been allowed to tighten the marble block using hammer at wedges & rope while raising ghe marble block from the mine, thus not negligently endangering the life of work persons employed in the mine, as required under the provisions of the Regulation 174(4) read with Regulation 181 of the Metallifeous Mines Regulations,1961 and section 18(4) of the Mines Act, 1952; and

(v) Work persons not been deployed in the mine without imparting vocational training as required under the provisions of the Rule 6(1) of Mine Vocational Training Rule, 1966;

this accident could have been averted.

 Code : 0993 Drowning in Water
 (1 Death)

39. Date - 11.03.22 Mine - RAJPURA DARIBA LEAD & ZINC MINE
 Time - 11.10 Owner - SHRI ARUN MISRA
 Dist. - Rajsamand, State - Rajasthan
 Person(s) Killed :
 1. Jagdish Ch. Jat, Cont. worker(Mate), Male,
 53 Years

While a jammed inter level water drainage borehole in an underground Lead & Zinc Mine was being cleared, suddenly the borehole got cleared, the Mining mate clearing the borehole slipped in the water accumulated upto a height of about 1.1m his left foot got sucked into the borehole with water and was stuck in such a manner that he got drowned and asphyxiated causing death after about 2 hours, while being taken to the Hospital."

Had,

the activity of clearing the jammed inter level borehole been carried out as the Standard Operating Procedure (SOP) framed for the purpose thus not negligently endangered the life in the mine as required under Regulation 181 of the Metalliferous Mine Regulation, 1961 read with a Standard Operating Procedure (SOP) to be followed for water Management dated 29.10.2021 and Regulation 45(1) and (2), 46(1) (c), 46(2) (b) and 47(1) (b) of the Metalliferous Mines Regulation, 1961.

this accident could have been averted.

Code : 0999 Unclassified
(1 Death)

40. Date - 21.10.22 Mine - KRISHNA GODAVARI PRODUCTION MINE
Time - 18.30 Owner - OIL & NATURAL GAS CORPORATION LTD.
Dist. - East Godavari, State - Andhra Pradesh
Person(s) Killed :
1. P.Apparao, Welder, Male, 52 Years

While a welder was cutting top portion of an empty metal drum, which was earlier filled with pour point depressant (a highly inflammable liquid) with oxygen-acetylene gas cutter in an oil mine, Suddenly the remnant inflammable liquid (converted into gas) exploded inflicting serious burn injuries to the welder to which he succumbed after five days during shifting from one hospital to another hospital for better treatment".

Had

(i) the hot work permit for cutting the empty metal drum been issued as required under Regulation 98(6) of the Oil Mines Regulations, 2017; and

(ii) the work for which hot permit issued (i.e. cutting of metal strips of 3.5 inch tubing bundles) was restricted within itself, thereby negligently or willfully not endangering the safety of person(s) employed therein during cutting of empty metal drum as required under Regulation 133 of the Oil 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 | 02-02-01 | A. Subha Naidy & Co. Mica | 9 | 0 | Fall of Roof |
| 2 | 11-04-02 | Redhill Ruby | 5 | 4 | Fall of Roof |
| 3 | 26/09/04 | Hannumanoya/41B Mica | 7 | 0 | Fall of Sides |
| 4 | 29/12/06 | Salayakhad Mica | 4 | 2 | Fall of Sides |
| 5 | 24/01/07 | Chirki Mica | 5 | 0 | Fall of Sides |
| 6 | 10-02-08 | Murwara Limestone | 7 | 2 | Fall of Sides |
| 7 | 06-12-10 | Shivraipur Manganese | 12 | 0 | Fall of Sides |
| 8 | 26/04/11 | Charki Mica | 4 | 0 | Fall of Sides |
| 9 | 04-06-12 | Make Myebye Wolfram | 4 | 0 | Fall of Sides |
| 10 | 21/10/13 | North Anantapur Gold | 7 | 0 | Fall of Roof |
| 11 | 24/07/14 | Maya Salt | 5 | 2 | Explosives |
| 12 | 05-11-14 | Tadaiya Mica | 5 | 0 | Irruption of Water |
| 13 | 12-08-16 | Wazunchaung Wolfram | 9 | 0 | Miscellaneous on Surface |
| 14 | 13/05/19 | Aulajhari Manganese | 4 | 2 | Fall of Sides |
| 15 | 28/01/20 | Hsaikho (Mile 28.6) Limestone | 5 | 0 | Fall of Sides |
| 16 | 13/09/20 | Bhalua Mica | 4 | 0 | Suffocation by Gases |
| 17 | 18/09/20 | Badwin Lead-Silver | 11 | 0 | In Shaft Ascending/Descending |
| 18 | 19/02/23 | Bawdwin Silver-Lead-Zinc | 6 | 1 | In Shaft Ascending/Descending |
| 19 | 20/02/23 | Cherangcode Mica | 7 | 1 | Fall of Sides |
| 20 | 01-03-27 | Telewadi Manganese | 4 | 0 | Fall of Sides |
| 21 | 26/05/27 | Bawdwin Silver-Lead | 5 | 0 | Suffocation by Gases |
| 22 | 10-09-27 | Tarki Limestone | 4 | 0 | Fall of Sides |
| 23 | 12-10-27 | Kyauktalone Limestone | 9 | 18 | Explosives |
| 24 | 16/05/29 | Bawdwin Silver-Lead-Zinc | 10 | 0 | Fall of Roof |
| 25 | 06-01-31 | Kanbank Tin and Wolfram | 4 | 0 | Fall of Sides |
| 26 | 14/09/31 | Taungpila Tin | 5 | 0 | Fall of Sides |
| 27 | 12-04-32 | Lady Rangi Mica | 19 | 0 | Suffocation by Gases |
| 28 | 24/08/36 | Wagon North Tin & Wolfram | 7 | 0 | Fall of Sides |
| 29 | 26/02/37 | Salaiya Pahari Limestone | 9 | 0 | Fall of Sides |
| 30 | 22/12/38 | Matauni Mica | 4 | 0 | Fall of Sides |
| 31 | 05-10-40 | Porcupine Steatite | 4 | 2 | Fall of Roof |
| 32 | 15/07/43 | Tatahwa Mica | 5 | 0 | Falling Down Shaft |

| Sl. | Date of Accident | Name of Mine | Number of Persons | | Cause of Accident |
|-----|------------------|---------------------------------|-------------------|-----------|--------------------|
| | | | Killed | S/Injured | |
| 33 | 07-11-45 | Noamundi Iron | 4 | 0 | Fall of Sides |
| 34 | 13/05/46 | Kaza Limestone | 4 | 0 | Fall of Sides |
| 35 | 06-12-46 | Pattabhirama & Margin Mica | 8 | 0 | Irruption of Water |
| 36 | 21/01/49 | Kharonia Mica | 5 | 0 | Explosives |
| 37 | 08-07-50 | Basorhai Diamonds | 6 | 0 | Fall of Sides |
| 38 | 14/06/51 | Mysore Gold | 4 | 0 | Rock Burst |
| 39 | 11-10-51 | Oorgaum Gold | 9 | 9 | Rock Burst |
| 40 | 02-11-51 | Champion Reef Gold | 4 | 0 | Rock Burst |
| 41 | 19/04/52 | Champion Reef Gold | 20 | 4 | Rock Burst |
| 42 | 30/06/52 | Champion Reef Gold | 10 | 5 | Rock Burst |
| 43 | 01-05-53 | Lanjhera Manganese | 5 | 2 | Fall of Sides |
| 44 | 21/06/54 | Kachhidhana Manganese | 5 | 1 | Fall of Sides |
| 45 | 30/11/54 | Mysore Gold | 4 | 1 | Rock Burst |
| 46 | 23/12/54 | Venkaji gudda (Vajra) Manganese | 5 | 0 | Fall of Sides |
| 47 | 27/05/55 | Champion Reef Gold | 10 | 8 | Rock Burst |
| 48 | 21/04/56 | Yeshwantanagar Manganese | 5 | 1 | Fall of Sides |
| 49 | 18/08/56 | Tikuri Bauxite | 5 | 0 | Fall of Sides |
| 50 | 22/01/57 | Madadakere Manganese | 4 | 0 | Fall of Sides |
| 51 | 29/09/57 | Rajupalem Barytes | 11 | 2 | Fall of Sides |
| 52 | 19/02/58 | Aytemvalasa Manganese | 7 | 3 | Fall of Sides |
| 53 | 12-05-59 | Siddimella Steatite | 8 | 0 | Fall of Sides |
| 54 | 14/05/59 | Serima White Earth | 4 | 2 | Fall of Roof |
| 55 | 26/06/61 | Gua Iron | 4 | 1 | Explosives |
| 56 | 24/03/62 | Champion Reef Gold | 4 | 4 | Rock Burst |
| 57 | 01-06-63 | Junawani Manganese | 5 | 2 | Fall of Sides |
| 58 | 13/08/63 | Nundydroog Gold | 5 | 2 | Rock Burst |
| 59 | 16/02/64 | Sonnedenhalli Iron | 4 | 1 | Fall of Sides |
| 60 | 13/10/64 | Patnibona (Bakudih) Stone | 6 | 0 | Fall of Sides |
| 61 | 06-02-66 | Mysore Gold | 7 | 0 | Overwinding |
| 62 | 02-08-66 | Borgafall Iron | 5 | 0 | Explosives |
| 63 | 25/12/66 | Venkateshwara Beryl & Mica | 6 | 0 | Fall of Sides |
| 64 | 06-06-68 | Sarvodaya Stone | 7 | 0 | Explosives |
| 65 | 19/11/69 | Moriya Iron | 4 | 3 | Fall of Sides |
| 66 | 14/10/70 | Bhadrasai Manganese | 4 | 0 | Fall of Sides |
| 67 | 29/01/71 | Bhatti Badarpur Stone | 4 | 0 | Fall of Sides |
| 68 | 20/06/72 | Balawali Mica | 4 | 0 | Fall of Roof |
| 69 | 22/08/78 | Kukda Limestone | 7 | 6 | Fall of Sides |
| 70 | 10-05-80 | Kalidungri Dolomite | 5 | 0 | Fall of Sides |

| Sl. | Date of Accident | Name of Mine | Number of Persons | | Cause of Accident |
|-----|------------------|--|-------------------|-----------|------------------------------------|
| | | | Killed | S/Injured | |
| 71 | 17/08/80 | Bhatti Badarpur Stone | 4 | 0 | Fall of Sides |
| 72 | 08-09-83 | Manoharpur Iron | 4 | 1 | Truck |
| 73 | 04-04-84 | Surda Copper | 5 | 0 | Nitrous Fumes |
| 74 | 30/05/84 | Ahmedabad Oil Project | 4 | 0 | Fire |
| 75 | 22/02/86 | Rekha Fluorspar | 8 | 2 | Fall of Sides |
| 76 | 15/11/88 | Ankleshwar Oil Project | 5 | 0 | Outbreak of Fire |
| 77 | 14/07/89 | Nundydroog Gold | 5 | 0 | Rock Burst |
| 78 | 30/05/90 | Bhatti Badarpur Stone | 7 | 0 | Fall of Sides |
| 79 | 22/06/91 | Bandu Basaria Limestone | 6 | 1 | Fall of Overhangs |
| 80 | 11-07-93 | Pali Silica Sand | 4 | 0 | Fall of Sides |
| 81 | 25/10/93 | Pokarna Granite | 5 | 1 | Explosives |
| 82 | 09-07-94 | Maruthi Manganese | 4 | 1 | Fall of Sides |
| 83 | 28/08/94 | Rajpura Dariba Galena & Sphal. | 13 | 0 | Irruption of Water |
| 84 | 16/02/95 | Pali Silica Sand | 4 | 0 | Fall of Sides |
| 85 | 08-11-96 | God Granite | 4 | 6 | Explosives |
| 86 | 17/04/99 | Barkundi Soapstone No. 1 | 6 | 2 | Fall of Sides |
| 87 | 21/04/01 | Jogogoria Stone Mine | 4 | 0 | Explosion/Ignition of Gas |
| 88 | 02-06-02 | Borli Limestone Mine | 4 | 0 | Fall of Sides |
| 89 | 18/11/02 | Devka Harmada Cheja Pathar Mine | 5 | 2 | Fall of Overhang |
| 90 | 11-03-06 | Surya Granite Opencast Mine | 4 | 0 | Fall of Object |
| 91 | 12-09-06 | Tollem Group Iron Ore Mine | 6 | 0 | Fall of Sides |
| 92 | 10-07-07 | Mandodi Limestone Mine | 5 | 1 | Fall of Sides |
| 93 | 12-05-08 | SMS Infrastructure Ltd. Stone | 9 | 20 | Other explosive accident |
| 94 | 25/02/10 | Hamsa Mineral Granite Mine | 14 | 1 | Fall of Sides |
| 95 | 26/03/10 | Bharkundi No. 1 Soapstone Mine | 8 | 0 | Fall of Sides |
| 96 | 24/04/10 | Prashant Mining Quartz & Felspar Mine | 4 | 0 | Fall of Overhang |
| 97 | 27/08/10 | Deokhera Garnet Mine | 5 | 0 | Fall of Overhang |
| 98 | 23/07/13 | Granite Buid Stone Quarry SY 376/3 - 2 | 4 | 1 | Fall of Overhang |
| 99 | 26/11/14 | PIPALJORI STONE MINE | 4 | 0 | Fall of Slides |
| 100 | 31/01/17 | Sindesar Khurd Galena & Sphalarite | 4 | 2 | Other non-transportation machinery |
| 101 | 27/05/17 | Vyshnavi Stone Quarry | 7 | 0 | Fall of sides |

| Sl. | Date of Accident | Name of Mine | Number of Persons | | Cause of Accident |
|-----|------------------|--|-------------------|-----------|---|
| | | | Killed | S/Injured | |
| 102 | 13/03/19 | Ahmedabad Workover Oil Mine | 6 | 0 | Outbreak of fire or spontaneous heating |
| 103 | 28/02/20 | Billi Markundi Stone Mine, Araj N.4585 | 5 | 2 | Fall of sides |
| 104 | 08/05/21 | C. Kasturi Bai Barytes | 10 | 0 | Other explosive accident |
| 105 | 01/01/22 | Dadam Stone Mine | 5 | 3 | Fall of sides |

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. | Date of Accident | Name of Mine & Cause | No. of Persons Killed | Constitution of Court of Enquiry | Assessors |
|-----|------------------|---|-----------------------|------------------------------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 07/11/45 | Noamundi Iron (Fall of Sides) | 4 | Information not readily available. | |
| 2 | 19/04/52 | a) Champion Reef Gold (Rock Burst) | 20 | Dy. Commissioner, Kolar | 1. Chief Inspector of Mines 2. Ex. C.I.M. & Explosives 3. W.T. Hooking, Mining Engr. 4. M. C. Narsimhan, (Laour) |
| | 30/06/52 | b) Champion Reef Gold (Rock Burst) | 10 | | |
| | 19/08/52 | c) Oorgaum Gold (Rock Burst) | 1 | | |
| 3 | 10/01/83 | a) Bhatti Badarpur Stone (Fall of Sides) | 1 | Justice V. S. Deshpande | 1. S. Sankaran 2. S. L. Passy, (INTUC) |
| | 16/01/83 | b) Bhatti Badarpur Stone (Fall of Sides) | 1 | | |
| | | c) Bhatti Badarpur Stone (Fall of Sides) | 3 | | |

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/suspn. 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 |

STATEMENT 2

| Code | Place of Accident | Code | Place of Accident |
|------|--|------|--|
| | BELOW GROUND | | OPENCAST |
| | Development area | | Benches |
| 111 | < 10m of development face | 211 | Waste/overburden alluvium |
| 112 | > 10m and within working district | 212 | Waste/overburden float |
| | Long wall panel | 213 | Waste/overburden hard rock |
| 121 | > 10m of long wall face | 214 | Coal/ore benches |
| 122 | Gate roads in long wall panels | | Quarry (other than benches) |
| | Depillaring / stoping | 221 | Top of the quarry |
| 131 | < 10m of face | 222 | Bed of the quarry |
| 132 | > 10m but < 30m | | Roads |
| 133 | > 30m but within working district | 231 | Haul roads |
| | Outside working district | 232 | Rope haulage roads |
| 141 | Traveling roadways | 239 | Other transportation roads |
| 149 | Unclassified | | Other open cast places |
| | Tramming roadways | 241 | Waste dump |
| 151 | Within district | 249 | Other places (specify) |
| 152 | Outside district | | |
| | Haulage roadways (within district) | | ABOVE GROUND |
| 161 | Rope haulage roadways | | Transportation road/sites |
| 162 | Conveyor roadways | 311 | Aerial ropeways |
| 163 | Loco roadways | 312 | Rope haulage roads |
| 169 | Unclassified | 313 | Wheeled trackless transportation roads |
| | Haulage roadways (outside district) | 314 | Railway lines belonging to mines |
| 171 | Rope haulage roadways | 315 | Petroleum pipelines |
| 172 | Conveyor roadways | 319 | Unclassified |
| 173 | Loco roadways | | Plant sites |
| 179 | Unclassified | 321 | Site of ore handling plants |
| 180 | Shaft | 322 | Workshop, powerhouse, engine room, |
| etc. | | | |
| 199 | Other below ground places | 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 |



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Officials Associated with publication



Shri Ujjwal Tah
Director General



Shri Jyoti Prasad Arya (ISS 1993)
Deputy Director General



Smt Gunjan Vaish (ISS 2011)
Director



Shri P C Bhaskar (ISS 2011)
Director



Shri Ashish Kumar (ISS 2016)
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खान सुरक्षा महानिदेशालय

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