

Item No. 03

**BEFORE THE NATIONAL GREEN TRIBUNAL
CENTRAL ZONE BENCH, BHOPAL
(Through Video Conferencing)**

**Original Application No.126/2023(CZ)
(I.A.No.05/2024)**

(O.A.No.547/2023 - PB)

News Item Titled "Chhattisgarh: Worker Killed As Molten Slag Falls On Him
At Steel Plant" Appearing In PTI Dated 22.08.2023

Date of Hearing: **27.02.2024**

**CORAM: HON'BLE MR. JUSTICE SHEO KUMAR SINGH, JUDICIAL MEMBER
HON'BLE DR. SATYAGOPAL KORLAPATI, EXPERT MEMBER**

For Applicant (s):	None.
For Respondent(s):	Mr. Gopal Jain, Sr, Adv. (with Ms. Gauri Rasgotra, Adv. Ms. Priyashree Sharma, Adv., Ms. Charvi Patni, Adv., Ms. Shubhra Sharma, Adv., Mr. Manish Kharbanda, Adv. And Ms. Ekta Gupta, Adv.) Dr. Sapna Aggarwal, Adv. Mr. Yadvendra Yadav, Adv. Mr. Abhinay Sharma, Adv. (with Ms. Deeksha Prakash, Adv. & Ms. Parul Khurana, Adv.) Mr. Gurpreet Bagga, Adv.

ORDER

1. The issue highlighted in this application is death of a worker in a steel plant in Raigarh, District - Chhattisgarh on account of falling hot slag on him and there are allegations that there are non-compliances of the environmental norms and the SOP issued in this behalf.
2. This Tribunal vide order dated 09.10.2023 issued a notice to the respondents but none has filed the reply.
3. CECB has filed the report but the report is defective on the sense that there is nothing with regard to the deceased and action taken against the project proponent for the negligence and non-compliances of the SOPs.
4. A document has been filed which is on record which is report of Factory Manager addressed to Deputy Director, Industrial Health and Safety,

Chakradhar Nagar Chowk, Raigarh, Chhattisgarh with the provision of compensation and report of the Regional Officer but no progress has been reported and no reply has been filed by the respondents.

5. In response to the reply submitted by the Chhattisgarh Environmental Conservation Board (CECB), it is submitted that the Regional Officer, CECB, Raigarh visited the site and submitted the report.
6. In the aforesaid inspection report, it was noted that there was a plan to provide Rs. 66,98,000/- (Rupees Sixty Six Lakhs Ninety Eight Thousand) lump-sum and Rs. 13,000/- (Rupees Thirteen Thousand) per month pension to the affected nominees by the Industry Management. The breakdown of the said amounts was provided in the letter dated 11.09.2023 sent by the Steel Plant to the Deputy Director of Industrial Health and Safety as under:

Workmen Compensation	Rs. 10,96,000.00
Welfare Scheme (voluntary by the Steel Plant)	Rs. 5,00,000.00 – paid
GPA	Rs. 44,00,000.00
Amount from EDLI	Rs. 7,02,000.00
Total	Rs. 66,98,000.00
Pension from Employee welfare scheme	
of the Steel Plant	Rs. 13,000.00 per month
Pension from EPF	As per Rule

Further, as per the inspection report, information had been given that an assistance amount of Rs. 5,00,000/- (Rupees Five Lakhs) would be provided to the affected family.

A true and translated copy of the letter dated 11.09.2023 sent by the Regional Office, CECB, Raigarh to CECB, Raipur; a true copy of the letter dated 11.09.2023 sent by the Steel Plant to the Deputy Director of Industrial Health and Safety along with a true and translated copy of the Inspection Report of CECB has been attached with the report.

7. Facts with regard to the incident are as follows:-

“That, as per the aforesaid inspection report dated 06.09.2023 received from the Regional Office of CECB, Raigarh, some of the facts pertaining to the said incident that came within the knowledge of the answering Respondent are as under:

- a. The incident occurred on 22.08.2023 at 3:27 AM near Slag Yard of Steel Melting Shop (hereinafter referred to as “S.M.S.”) -2.*
- b. The deceased worker was an employee of M/s. Jindal Steel and Power Limited since 1992. He was working as a payloader of S.M.S. – 1 until 2005 and as a payloader of S.M.S. – 2 since 2005.*
- c. As per the CCTV footage, it is seen that a slag pot full of hot slag was left to cool near another empty slag pot. Thereafter, the deceased worker added some amount of slag dust to the pot filled with hot slag instead of the empty slag pot. Unfortunately, the slag dust collected by the deceased worker was moist due to the monsoon season. When this moist slag dust got in contact with the molten hot slag in the filled pot, it resulted in a huge explosion due to which such molten hot slag fell directly on the deceased worker, thereby causing him to suffer severe burns and die on the spot.*
- d. A boundary wall was not found constructed on one side of the site due to which slag dust was found soaked in rainwater.*
- e. The Management had designated separate places for keeping empty slag pots and hot slag pots which was observed at the incident site.”*

8. It is submitted that the present matter does not come within the purview of CECB as it comes within the purview of the Director, Industrial Safety and Health, Directorate of Industries, Udyog Bhavan, Ring Road No. 1,

Telibandha, Raipur, Chhattisgarh. However, despite that being so, since CECB was impleaded as a party, CECB filed a reply dated 13.09.2023 before the NGT, New Delhi in O.A. No. 547/2023 before it got transferred to this Hon'ble Tribunal as the new O.A. No. 126/2023. The said reply was filed by the CECB after collating information from the concerned departments since CECB had been called upon to respond.

9. The respondent no. 5 project proponent Jindal Steel and Power Ltd. has submitted that :-

- a. *On 24.08.2023 the Deputy Director, Industrial Health and Safety had issued a show cause notice to JSP directing JSP to respond within seven days regarding the accident. Copy of the show cause notice dated 24.08.2023 issued by the Deputy Director, Industrial Health and Safety along with the true translated copy is annexed herewith.*
- b. *JSP after conducting a thorough internal investigation submitted a response to the Deputy Director, Industrial Health and Safety on 08.09.2023. Copy of the response dated 08.09.2023 is annexed herewith.*
- c. *At the outset, it is important to give details of the unfortunate incident at slag yard of JSP that took place on 22.08.2023 due to unintended use of slag from an unauthorised area and deviation of the standard operating procedure:*
 - i. *The deceased had collected slag from an area that was not designated for such activity which possibly had moisture and was unfit for use, thus, deviating from the standard operating procedure.*
 - ii. *The wet slag was added into a pot already filled with hot slag instead of an empty pot, which resulted in overflow/ spillage of slag outside the pot and on the pay loader resulting in the payloader catching fire which led to jamming of the payloaders operator's cabin.*

- iii. *A pot full of hot slag can be visibly distinguished from an empty pot as there is flame and smoke coming out of it. Regrettably this action of gathering the wet slag from an unauthorised area and placing it into a full slag pot is the cause of this unfortunate incident.*
 - iv. *The deceased was an experienced payload operator for the last 18 years out of his total tenure of 31 years at JSP and had received refresher training on safe slag handling on 17.06.2023.*
- d. *It is submitted that JSP's safety and training procedures and protocols are aligned with prevalent market standards and no casualty on account of such incident has ever occurred at JSP's plant previously. JSP has established a comprehensive training facility dedicated to their workforce where safety training is given to all employees as well as periodic refresher courses are provided in accordance with law and directions of the Deputy Director (Industrial Health and Safety) as may be issued from time to time. Additionally, JSP's line management conducts SOP based training directly on the shop floor (production area). This training encompasses a variety of methods including classroom sessions, on the job training, and toolbox talks, to ensure that the employees are well prepared and informed of all the protocols and safety methods.*
- e. *It is submitted that JSP, in view of the unfortunate incident, has also taken the actions to prevent any further mishap or occurrence of similar incident and has updated its SOP to bring in certification for the training. Copy of the training record for certification dated 29.08.2023 is annexed herewith. Copy of the revised SOP dated 28.08.2023 is annexed herewith.*
- f. *It is further submitted that on 06.09.2023, CECB conducted a physical inspection along with the scientist of JSP into the incident and has at para 7 clearly noted "on the inspection date, it was observed that the industry management had earmarked separate places for keeping empty slag and hot slag pots observed at incident site". A copy of the inspection report dated 11.09.2023 along with the true translated copy is annexed herewith.*

g. It is further stated that CECB Respondent No.3 filed a reply on 13.09.2023 before the Hon 'ble NGT Principal Bench wherein they have made the following submissions :-

"4. That, prior to delving into the facts of the present case, it is pertinent to note that 'slag' is a by-product of steelmaking produced specifically when molten steel is being separated from impurities. Such impurities separated from molten steel are in a molten, liquid form referred to as slag which solidifies upon cooling. That the slag disposal process entails the following steps:

- a) Collection of hot slag in slag pots.*
- b) Hot slag is let to cool,*
- c) Cooled slag is dumped into slag pits.*

** Empty slag pots are filled with dry slag dust before being filled with hot slag to prevent the hot slag from sticking to the pot and to enable easy disposal of the cooled slag into slag pits.*

5. That, as per the Inspection Report received from the Regional Office of CECB, Raigarh, the following facts pertaining to the said incident came within the knowledge of the answering Respondent:

- a. The incident occurred on 22.08.2023 at 3:27 AM near Slag Yard of Steel Melting Shop (hereinafter referred to as "**S.M.S.** ") 2.*
- b. The deceased worker was an employee of Mis Jindal Steel and Power Limited since 1992, that he was working as a payloador of S.MS.-1 until 2005 and as a payloador of S.M.S.-2 since 2005.*
- c. As per the CCTV footage, it is seen that a slag potful! Of hot slag was left to cool near another empty slag pot. Further, the deceased worker added some amount of slag dust to the pot filled with hot slag instead of the empty slag pot. Unfortunately, the slag dust collected by the deceased worker was moist due to the current monsoon season. When this moist slag dust got in contact with the molten hot slag in the filled pot, it resulted in a huge explosion due to which such*

molten hot slag fell directly on the deceased worker, he suffered severe burns and died on the spot.

d. The Management had designated separate places for keeping empty slag pots and hot slag pots which was observed at the incident site.

6. Moreover, though the matter comes within the purview of health and safety department, CECB is filing the present affidavit after collating information from the concerned departments since CECE has been called upon to respond.

7. Thus, it is submitted that, in the present case, appropriate and necessary action has been taken by the CECE and other concerned departments for safeguarding the interests of the deceased worker by providing for his family.

10. It is further submitted that JSP has been operating its plant based on consent to operate issued by CECB from time to time. There has been no environmental damage or pollution caused by the slag handling procedure adopted by JSP in its plants, as alleged or otherwise and JSP has consistently invested in comprehensive training programs to ensure that all workers are well informed about SOPs and safety protocols. There is a regular audit and inspection conducted to identify any improvement in these procedures. JSP has provided compensation to the worker's family by paying a onetime compensation and other benefits including paying a monthly pension to the family.

11. After incident the Deputy Director, Industrial Health and Safety Division, Raigarh has issued a showcase notice on 24.08.2023 calling explanation from the project proponent and the proposed project proponent submitted the reply with the following facts:-

i. "At the outset, it is submitted that the aforesaid incident at Steel Melting Shop - 2 ('SMS - 2') slag yard of JSP that took place on 22.08.2023 was a tragic occurrence due to an unintended use of slag from an unauthorised area and incorrect application of steps and procedure.

- ii. *The operator Late Chinilal Patel was an experienced payload operator for the last 18 years, out of his total tenure of 31 years at JSP. He was well aware of the standard operating procedures which have been published and are available to all employees, who are also periodically trained on the same. The slag handling SOP is attached herewith.*
- iii. *On the day of the said unfortunate accident, Late Mr. Chinnilal Patel deviated from the SOP as illustrated, which led to the hot slag falling on the payload, causing a fire which led to his death as he was the payload operator.*
- iv. *The video footage obtained from the CCTV installed on the premises indicates that Late Chinilal Patal, collected slag from an area that was not designated for such activity, which possibly had moisture and was unfit for use, thus deviating from standard procedure. Thereafter, this wet slag was added into a pot already filled with hot slag, which resulted in overflow/'spillage' of slag outside the pot and on the payload's resulting in the payload catching fire which led to jamming of the doors of Mr. Chinnilal's (payload operator's) cabin. Pertinently, a pot full of hot slag can be visibly distinguished from an empty pot as there is flame and smoke coming out of it. Regrettably, this action of gathering the wet slag from an unauthorized area and placing it into a full slag pot is the cause of this tragic incident.*
- v. *It is noteworthy that Late Mr. Chinilal Patel had received refresher training on safe slag handling on 17.06.2023.*
- vi. *It is submitted that JSP's safety and training procedure and protocols are aligned with prevalent market standards and no casualty on account of such incident has ever occurred at JSP's plant previously.*
- vii. *In any case, in view of this tragic incident, JSP has taken the following actions to prevent any further mishap or occurrence of similar incident:*
 - a) *Certification after training is being made mandatory for all slag handling section operators.*
 - b) *Segregated full and empty slag pots and demarcated the area.*

- c) *Reviewed and updated the Safety Work Procedure for hot material handling to incorporate point (i) and (ii) above.*
- viii. *JSP has established a comprehensive training facility dedicated to our workforce where safety training is given to all employees, as well as periodic refresher courses are provided in accordance with the guidelines set forth by DDIHS. Additionally, JSP's line management conducts SOP-based training directly on the shop floor. This training encompasses a variety of methods, including classroom sessions, on-the-job training, and toolbox talks, to ensure our employees are well-prepared and informed of all the protocols and safety measures.*
- ix. *Be that as it may, JSP is committed towards its employees and their families and will be supporting Late Chinilal Patel's family during this challenging time.*
- x. *JSP remains committed to achieve "Zero Harm" as a responsible corporate citizen and ensuring safety remains paramount in our operations."*

12. The learned counsel for the MoEF&CC has submitted that :-

1. In exercise of the powers conferred by sections 6, 8, and 25 of the Environment (Protection) Act, 1986, the erstwhile Ministry of Environment and Forests, New Delhi vide G.S.R No. 395 (E) dated 04th April, 2016 notified, the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. These rules were applicable to all persons who generate, collect, receive, store, transport, treat. Dispose or handle Hazardous waste in any form. According to these Rules every operator of a waste facility is required to obtain authorisation in accordance to the procedures specified under the Rules. These rules were applicable to the management of hazardous and other wastes as specified in the Schedules to these rules but shall not apply to :-

a. waste-water and exhaust gases as covered under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) and the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981) and the rules made thereunder and as amended from time to time.

- b. *wastes arising out of the operation from ships beyond five kilometres of the relevant baseline as covered under the provisions of the Merchant Shipping Act, 1958 (44 of 1958) and the rules made thereunder and as amended from time to time.*
 - c. *radio-active wastes as covered under the provisions of the Atomic Energy Act, 1962 (33 of 1962) and the rules made thereunder and as amended from time to time:*
 - d. *bio-medical wastes covered under the Bio-Medical Wastes (Management and Handling) Rules, 1998 made under the Act and as amended from time to time, and*
 - e. *wastes covered under the Municipal Solid Wastes (Management and Handling) Rules, 2000 made under the Act and as amended from time to time.*
2. *That according to these Rules every occupier of the facility who is engaged in handling, generation, collection, storage, packaging, transportation, use, treatment, processing, recycling, recovery, pre-processing, co-processing, utilisation, offering for sale, transfer or disposal of the hazardous and other wastes shall be required to obtain an authorisation from the State Pollution Control Board in accordance to the procedures specified under the Rules and that Rule 3 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 deals with the Definition' clause which inter-alia includes the following:*

3.(1)17. 'Hazardous waste' means any waste which by reason of characteristics such as physical, chemical, biological, reactive, toxic, flammable, explosive or corrosive, causes danger or is likely to cause danger to health or environment, whether alone or in contact with other wastes or substances, shall include-

- i. Waste specified under column (3) of Schedule I:*
- ii. Waste having equal to or more than the concentration limits specified for the constituents in class A and class B*

of Schedule II or any of the characteristics as specified in class C of Schedule II; and

iii. Wastes specified in Part A of Schedule III in respect of import or export of such wastes or the wastes not specified in Part A but exhibit hazardous characteristics specified in Part C of Schedule III

3.(1) 23. Other wastes' means wastes specified in Part B and Part D of Schedule III for the purpose of import and export and include such indigenously produced wastes as may be notified from time to time. (As amended vide Notification G.S.R. 798/E) dated 12th November, 2021).

3. Rule '4' of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 titled as "Responsibilities of the occupier for management of hazardous and other wastes" specified that- An occupier shall follow the following steps namely: prevention, minimization, reuse, recycling, recovery, utilisation including co-processing and safe disposal of hazardous and other wastes.

4. Rule '5' of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 titled as "Responsibilities of State Government for environmentally sound management of hazardous and other wastes" reads as follows:

1. Department of Industry in the State or any other government agency authorised in this regard by the State Government, to ensure earmarking or allocation of industrial space or shed for recycling, pre-processing and other utilization of hazardous or other waste in the existing and upcoming industrial park, estate and industrial clusters;

2. Department of Labour in the State or any other government agency authorised in this regard by the State Government shall, -

a. ensure recognition and registration of workers involved in generation, handling, collection, reception, treatment, transport, storage, reuse, recycling. recovery, pre-

processing, utilisation including co-processing and disposal of hazardous waste;

b. assist formation of groups of such workers to facilitate setting up Such facilities

c. undertake industrial skill development activities for the workers involved in generation, handling, collection, reception, treatment, transport, storage reuse, recycling. recovery, pre-processing, utilisation including co-processing and disposal of hazardous waste;

d. undertake annual monitoring and to ensure safety and health of workers involved in generation, handling, collection, reception, treatment, transport, storage, reuse, recycling, recovery, pre-processing, utilisation including co-processing and disposal of hazardous waste;

(3) Every State Government may prepare integrated plan for effective implementation of these provisions and to submit annual report to the Ministry of Environment, Forest and Climate Change, in the Central Government.

(As amended vide Notification G.S.R. 641 (E) dated October, 2020)

5. As per Schedule VII of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules. 2016, it is inter-alia duty of State Pollution Control Board or Pollution Control Committees to: -

- i. Inventorisation of hazardous and other wastes*
- ii. Grant and renewal of authorization*
- iii. Monitoring of compliance of various provisions and conditions of permission including conditions of permission for issued by Ministry of Environment, Forest and Climate Change for exports and imports.*
- iv. Examining the applications for imports submitted by the importers and forwarding the same to Ministry of Environment, Forest and Climate Change.*
- v. Implementation of programmes to prevent or reduce or minimise the generation of hazardous and other wastes.*
- vi. Action against violations of these rules.*
- vii. Any other function under these Rules assigned by Ministry of Environment, Forest and Climate Change from time to time.*

6. Rule '10' of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 titled Standard Operating Procedure or guidelines for actual users defines that "The Ministry of Environment, Forest and Climate Change or the Central Pollution Control Board may issue guidelines or standard operating procedures for environmentally sound management of hazardous and other wastes from time to time.
7. The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 states under Schedule I note that "The high-volume low effect wastes such as fly ash, Phosphogypsum, red mud, jarosite, Slags from pyrometallurgical operations, mine tailings and ore beneficiation rejects are excluded from the category of hazardous wastes. Separate guidelines on the management of these wastes shall be issued by Central Pollution Control Board and that separate guidelines on the management of these wastes have been issued by the Central Pollution Control Board. In view of the same, the answering respondent also issued a letter dated 22.11.2023 to CPCB for submission of a report for Compliance of Guidelines issued by CPCB for Handling and management of slags generated from pyro-metallurgical operation in Iron and Steel industries by M/s Jindal Steel and Power Ltd. And SPCBs and the State Governments are the nodal agencies to ensure the enforcement and implementation Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 on ground. which include handling, generation, collection, storage, packaging, transportation, use, treatment processing, recycling, recovery, pre-processing, co-processing utilization offering for sale transfer or disposal of the hazardous other wastes."
13. We have examined the report submitted by the project proponent to the Industrial Health and Safety Department (Deputy Director, Raigarh) with the provision and compensation to the tune of approximately Rs. 66,98,000/- in addition to pension from Employees Welfare Scheme of J.S.P.L. at the rate of Rs. 13,000 per month and pension from EPF as per rule, thus, a sufficient amount of the compensation and the pension had been awarded by the project proponent to the deceased.

14. Accordingly, we direct the respondent to strictly observe and follow the Hazardous & Other Wastes (Management and Transboundary Movement) Rules, 2016 and the guidelines issued by the CPCB strictly in letter and spirit.
15. CECB will periodically monitor the compliances of the provisions of law and environmental rules and to take remedial actions according to rules.
16. With these observations, the **Original Application No. 126/2023** alongwith **I.A. No. 05/2024 stands disposed of.**

Sheo Kumar Singh, JM

Dr. Satyagopal Korlapati, EM

27th February, 2024
O.A No. 126/2023 (CZ)
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