BEFORE THE NATIONAL GREEN TRIBUNAL
EASTERN ZONE BENCH, BLOCK III B, 3RD FLOOR,
ACTION AREA- II, NEW TOWN, KOLKATA-700157.

INTERIM APPLICATION NO. 130 OF 2024/EZ

In the matter of:

ORIGINAL APPLICATION NO. 107 OF 2023/EZ

BETWEEN

In the matter of:

Soumen Chakraborty

... Original Applicant

-Versus-

The Principal Secretary, Environment Department, Government of West Bengal & Ors.

...Respondents

SAMIR BHATTACHARYA NOTARY, CALCUTTA

PAPER BOOK

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29 NOV 2024

Buddhadev Ankar
Sujata Bhattacharya
Advocate

BEFORE THE NATIONAL GREEN TRIBUNAL
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The Documents submitted are true copes of the original

Advocate for the applicant in Interim Applicati

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NOTARY CALCUTTA

BEFORE THE NATIONAL GREEN TRIBUNAL

EASTERN ZONE BENCH, KOLKATA

INTERIM APPLICATION NO. OF 2024/EZ

In the matter of:

ORIGINAL APPLICATION NO. 107 OF 2023/EZ

AND

In the matter of:

Soumen Chakraborty, son of Late Shyamapada Chakraborty, Gopinath Bati, Gonna Dariapur, Dariapur, Purba Barddhaman, Gonna Dariapur, West Bengal – 713128.

... Original Applicant

-versus-

1. The Principal Secretary, Environment Department, Government of West Bengal, having its address at 5th floor, Pranisampad Bhavan, Block LB- II, Salt Lake, Sector – III, Bidhannagar, Kolkata - 700106. E-mail - psecy.env-wb@gov.in, Phone - 23352742.

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2. Chief Environment Officer, Environment Department, Government of West Bengal, acting as/representing State Wetland Authority, having its address at 5th floor, Pranisampad Bhavan, Block LB- II, Salt Lake, Sector – III, Bidhannagar, Kolkata – 700106, Phone - 23355246, Email - environmentwb@gmail.com.

3. Ministry of Environment, Forest & Climate Change (MOEF&CC) represented by its Deputy Director General, having its integrated Regional Office at 16-198, Sector- III, Salt Lake City, Kolkata-700106. E-mail :NA.

(Deleted vide order of the Hon'ble Tribunal Dated 12.09.2023)

4. West Bengal Pollution Control Board, represented by its Chairman, having its office at "paribesh Bhavan", 10A, Block -LA, Sector-III, Bidhannagar, Kolkata-700106, e-Mail: net.wbpcb-

SAMIR BHATTACHARYA ★ NOTARY, CALCUTTA ★

wb@bangla.gov.in, phone - 22023000.

5. The Chairman, West Bengal Pollution Control Board, "paribesh Bhavan", 10A, Block -LA, Sector-III, Bidhannagar, Kolkata-700106, e-Mail: net.wbpcb-wb@bangla.gov.in, phone - 2202 3000.

6. Central Pollution Control Board (CPCB) represented by its Regional Director, having its office at 1582, Rajdanga Main Road, South End Conclave, 5th & 6th Floor, Kolkata-700107, E-mail – rdkolkata.cpcb@gov.in, Phone - 03324416003.

7. ADM and DL&LRO, District Purba Bardhaman, having its address at Burdwan Rajbati, BC Road, Bardhaman – 713104, E-mail: admprbdn.gnl-wb@gov.in, Phone - 0342-2662364.

8. Chief Engineer, West Bengal Pollution Control Board, Department of Environment, Government of

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West Bengal, Paribesh Bhawan, 10A, Block-LA, Sector-III, Bidhannagar, Kolkata–700106, E-mail: see2.wbpcb-wb@bangla.gov.in, Phone - 033 2202 3000.

9. Superintendent of Police, Purba Bardhaman, having its address at Kachhri Road, Badamtala, Kalibazar, Bardhman, West Bengal – 713101, E-mail :NA.

10. District Magistrate, Purba Bardhaman, having its address Kachhari Road, Kalibazar Para, Purba Bardhaman, West Bengal – 713101, E-mail: dmprbdn.gnl-wb@gov.in.

11. Block Development Officer (BDO) Ausgram – I, P.O. - Guskara District – Purba Bardhaman, West Bengal – 713128, Email – NA, Phone : 03452-255056.

12. The Pradhan, Dignagar – II, Gram Panchayat, Village – Gopinathbati, P.O. – Gonna Dariapur, District – Purba

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Bardhaman, Pin – 713128, Email - NA.

13. The Principal Secretary, Food & Supplies Department (Govt. of West Bengal) having its address at 11/A, Mirza Ghalib Street, Khadya Bhawan, Block – B, Kolkata – 700087, Email: itcellfswb @gmail.com.

14. KM Agro Tech Private Limited, represented by its directors, a company having its registered office at Vill: Gopinathbati, P.O. Gonna, Dariapur, P.S. Ausgram, Purba Bardhaman, West Bengal - 713128 E-mail: kmagrotechpvtlimited2012@gmail.com, Phone: 03452257735.

15. Pradip Shaw, Director of M/s. KM Agro Tech Private Limited, Son of Arjun Shaw, residing Near Forest Office, P.O. – Guskara, P.S. – Ausgram, District – Purba Bardhaman, Pin – 713128, E-mail:

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pradipshawbwn@gmail.com, Phone: 9475346128.

16. Pritom Shaw, Director of M/s. KM Agro Tech Private Limited, Son of Pradip Shaw, residing at Bimshaw Near Forest Office, P.O. – Guskara, P.S. – Ausgram, District – Purba Bardhaman, Pin – 713128, E-mail: pritamshaw9live@gmail.com, Phone: 9475266482.

17. District Controller (Food & Supplies Department), Purba Bardhaman, having its address G.T. Road, West Bengal – 713101, Email - NA.

18. The Managing Director, West Bengal State Cooperative Marketing Federation Ltd. (Benfed), having its address Southern Conclave, 3rd floor, 1582, Rajdanga Main Road, Kolkata – 700107, Email: info@benfed.org, Phone: +913324414366.

(Deleted vide order of the Hon'ble Tribunal Dated 12.09.2023)

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19. Buddhadeb Ankure, son of Ganesh Ankure, residing at Village - Gopinath Bati, P.O. – Gonna, Dwariapur, Barddhaman, West Bengal – 713128.

...Respondents

The humble application for further directions on behalf of the RESPONDENT No.19 ~~Intervener/Added Applicant~~ abovenamed

1. The applicant is a citizen of India and a resident of Bardhaman, village Gopinath Bati. The said village has a population of more than 500 people and all the people in such village consume rice being a stable component of everyone's diet.
2. The rice mill being respondent no. 14 produce/manufacture and supplies rice to various distributors/shops in the surrounding locality of Gopinathbati, and the people of that locality, hotels, restaurants more or less, purchase and use the same for the purpose of their daily need of consumption and also use the raw extract of boiled starch to feed their domestic cattle.
3. The applicant states that the compound at Vill: Gopinathbati, P.O. Gonna, Dariapur, P.S. Ausgram, Purba Bardhaman, West Bengal – 713128, wherein the respondent numbers 14, 15 and 16 operate the rice mill is also being used for manufacturing fly ash bricks from raw fly ash. Consequently, huge amount of raw fly ash being stacked as raw material, with in the same compound where the

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production of rice from wet boiled paddy is being taken place. The proximity within which the manufacturing of rice and the manufacture of fly ash bricks are carried out are for certain causing pollutants emitted from the process, storage and manufacture of fly ash bricks to inevitably and alarmingly pollute the rice grains kept at the common compound. The airborne molecule of fly ash contaminates the rice even before they are bagged and bound to the market for consumption.

4. Since contaminated manufactured rice grains are thereafter packed and sold in the market, the consumers of such rice grains of different areas from children to senior citizen end up ingesting pollutants such as fly ash contaminated grains. The consequences thereof are extremely severe and leads to diseases such as cancer, heart, and respiratory diseases, stroke and various neurological problems / disorders.

5. The consequences of such consumption of rice contaminated with highly toxic substance and including/ containing elements such as lead, arsenic, mercury and cadmiumare fatal to slow-poison human body particularly of children, children within the womb and their mother. Further exposure of a person to such elements either through consumption or by inhalation is fatal. Both the operation of Rice Mill resulting production of Rice and illegal manufacturing of fly ash Bricks are sharing the common compound within a distance of less than/about 50 meters in between, which makes it all probable, mixing up of dust molecule/particle of fly ash with produced rice.

6. Due to the consumption of such rice, many of the aforesaid villagers have already fallen sick and have suffered/have

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been suffering from chronic diseases relating to the stomach, never ending nausea. There is a strong apprehension that if such polluted grains are continued to be made available in the market not adhering to and in gross violation of the minimum standards of safety and regulations as mandated by law, the said consumers not only of the village Ausgram but also of the adjacent area / elsewhere would continue to suffer from severe consequences.

7. Despite several protests/requests the simultaneous operation simultaneously of rice mill and fly ash brick manufacturing are not stopped and alarmingly continuing in the same compound of Rice Mill area.

8. The Respondent nos. 15 and 16 are the persons responsible for illegal and arbitrary operation of fly ash manufacturing activity within/inside the Rice Mill compound, are locally and politically influenced persons having enormous money power, enough to attempt influencing any local body or authority. As a result, there is every possibility of continuation of the operation of respondent no. 14 without any restraint unless the same is immediately imposed in accordance with law.

9. The storage and dumping of fly ash at the said compound would also lead to contamination of not only the soil but also water bodies, which further endangers the people in the surrounding areas from consuming such pollutants.

10. The applicant also attempted to draw the immediate attention of various authorities by visiting in person and also by way of written representation forwarded to The District Magistrate, Purba Barddhaman and copy forwarded to the

Block Development Officer, Ausgram -1, Guskara, Purba Barddhaman also, and the representation was duly received by the authorities with their seal of receipt. However, there was no effect. Copy of the representation dated 02.01.2024 is annexed hereto and marked with letter "A" as Annexure.

11. Under no circumstances, would any authority permit the operation of rice mill and manufacturing of fly ash from the same premises and if any authority has indeed issued any statutory approval for both such units, the said approval needs to be immediately cancelled and/or terminated forthwith since same have been wrongfully and illegally obtained by the respondent nos. 15 and 16 by suppressing relevant facts and/or misleading the said authorities.

12. The applicant states that most of the population at the aforesaid village is ignorant to the risk of consuming fly ash as it does not have an immediate severe effect, which cumulatively over a period of time is fatal for certain and hence it is the responsibility of the State to ensure that such protection is accorded to such people.

13. The applicant was taking steps to file an independent application before this Hon'ble Tribunal when he recently came to know that the instant application is already pending adjudication.

14. The applicant states that the applicant is a necessary and/or proper party for the effective adjudication of the issues and/or disputes raised in O.A. No. 107 of 2023 (Soumen Chakraborty –vs- The principal Secretary, Environment department, Government of West Bengal &Ors.). The applicant being a direct sufferer of the consumption of the contaminated rice sold by the respondent nos. 14, 15 and 16.

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has a direct and substantial interest and does not have any commercial interest in the instant dispute.

15. The residents of Gopinathbati village suffering from the consequences of the actions of the respondent nos. 14, 15 and 16 along with other consumers in the surrounding areas and elsewhere, have a right to be heard since it concerns them directly. In such circumstances, this Hon'ble Tribunal may be pleased to pass an order allowing the applicant to intervene in the instant proceeding.

16. In the aforesaid facts and substance your petitioner filed an applicant to intervene in the instant proceeding inter alia, in order to avoid multiplicity of Judicial proceedings.

17. By an order dated 18.03.2024, the Hon'ble National Green Tribunal was pleased to allow the applicant herein to be impleaded as party, inter alia, to agitate its cause relating to the identical environmental issue, in the present proceedings, to subserve the interest of Justice. Photocopy of the order dated 18.03.2024 is annexed hereto and marked with the letter "B".

18. Upon such impleadment, as aforesaid, the present applicant wrote to the petitioner for cause paper of the matter which were delivered to the applicant on 19.03.2024.

19. Upon perusal of those documents supplied, the applicant, inter alia, came across a document being the committee report prepared and filed, by virtue of order of this Hon'ble Tribunal dated 12.09.2023.

20. Upon perusal of the entire pleadings including such committee report filed by the West Bengal Pollution Control Board (WBPCB) your petitioner has come across the various points of serious discrepancies, impacting the

Buddhadev Ankure
Filed by
Advocate

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very root of the subject matter involved herein, which are in violation of the order dated 12.09.2023.

21. The report suffers from gross material irregularities on its face. Such material irregularities are described hereinbelow:

(i) It is seen from the committee report dated 30.11.2023 that neither the District Magistrate nor the Additional District Magistrate was present during the Inspection at the subject premises. Instead, one Mr. Sribash Bhakta, Dy. DL&LRO, who is much below the rank of the DM/ADM was present at the time of inspection as a part of the 3 members' committee.

(ii) ADM and DL&LRO was absent at the time of inspection, as per the direction of this Hon'ble Tribunal, and instead sending the Dy. DL&LRO at his own choice and fancy, tantamount contumacious violation of the Order of Hon'ble National Green Tribunal.

(iii) The report contains factual information without any support or substantial document being annexed, which are unreliable and incorrect based on the knowledge of the applicant.

(iv) Moreover, from the report it transpires that the rice mill not running on the particular day of the inspection, which fact completely undermines the inspection and its outcome as the effects of the fly-ash brick manufacturing upon the rice mill and its production activity has not been recorded.

(v) On the date of inspection, the rice mill operation was purposely closed so that the production of rice and the contamination of the same with the air borne fly ash,

Buddhadeb Ankenyal
Advocate

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was not witnessed by the committee at the time of inspection.

(vi) Despite the orders of the Hon'ble Tribunal the private respondent numbers 14, 15 and 16 have not provided the special committee the opportunity to inspect the rice mill and to obtain sample of rice which would have helped in ascertaining the effect of the degree of pollution on the edible rice grains.

(vii) It is stated in the report that consent to operate a fly-ash brick manufacturing unit is not required as the same comes under "white category", however, the report does not state whether such operations can be carried out simultaneously beside a rice mill unit in such close proximity of manufacturing of eatable, to be consumed by the consumers.

(viii) The report states that there is no health impact, visibly evident, or that there is no deposition of fly-ash without conducting any sample testing of the surroundings including the effects of fly-ash contamination on rice, and as the rice mill was not functioning on the day of inspection, there is no conclusion which can be drawn as to the same.

22. In such circumstances, it is humbly submitted that the report filed by the committee on affidavit is vague and filed without proper assessment and even without any sample testing in true sense to ascertain the allegation as to contamination and the preparation of such report in deviation to the Order dated 12th September 2023, besides being biased and *malafide*. No reliance, therefore, should be placed on such report.

Buddhadeb Ankush
Advocate

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23. In the aforesaid backdrop the intervenor appointed one RSP Green Development and Laboratories Pvt. Ltd. which is a QCI & NABET Accredited EIA and Mining Consultancy and ISO 9001:2015 & ISO 14001:2015 Certified Company for assessment of the environment impact and assessment of air and water pollution and contamination of fly ash with rice grain for operation of rice mill and manufacturing of fly ash from the same premises by the respondent no. 14 KM Agro Tech Private Limited. Your petitioner bore the costs for such inspection and assessment out of his own pocket.

24. Upon the request and requisition being made by the applicant/intervenor herein, the representative of the RSP Green Development and Laboratories Pvt. Ltd. visited the location of the respondent no. 14 KM Agro Tech Private Limited. The representative of the said organization collected sample technical and non-technical data from within the radius of 1 km of the respondent no. 14.

25. Said RSP Green Development and Laboratories Pvt. Ltd. had conducted its survey and collected sample of both technical and non-technical environmental data from the outside of the unit of rice mill and manufacturing of fly ash bricks.

26. After conducting the survey and collecting the aforesaid sample of both technical and non-technical environmental data the said RSP Green Development and Laboratories Pvt. Ltd. Prepared a detailed report containing environmental impact in and around the said unit of Rice Mill and manufacturing of fly ash bricks at the nearby village and the health impact of villagers.

Buddhadeb Ankur
Filed by
Advocate

A copy of the said detailed report prepared by the RSP Green Development and Laboratories Pvt. Ltd. is annexed herewith and marked with Annexure "C".

27. During the survey a comprehensive environmental assessment survey was done by the said RSP Green Development and Laboratories Pvt. Ltd. to understand the local air and water environment and the field impact of the emission and discharge on the local micro-environment. Sample collection planning was configured based on following attributes:

1. The core zone (within 1 Km. radius) was considered for primary sample collection and analysis for the air and water environment.

2. Sampling sites were selected based on grid distribution of core zone and representative point identification.

3. Stratified sampling approach was undertaken.

4. Nature of surface water sample collected were composite.

5. High Volume Sampler was used for air quality assessment.

28. From the said report of environmental impact, it transpires that due to emission of rice mill waste and consequent pollution from the said waste of the unit of Rice Mill and manufacturing of fly ash bricks are very high upon the air water and soil around the said unit, and for the aforesaid reason there have been serious health impact upon the villagers.

29. Moreover, from aforesaid report it further transpires that there has been continuous contamination in the outflow water coming from the said rice mill.

30. In the aforesaid backdrop your petitioner prays for an order for acceptance of the report prepared by the RSP Green Development and Laboratories Pvt. Ltd. which is a QCI & NABET Accredited EIA and Mining Consultancy and ISO 9001:2015 & ISO 14001:2015 Certified Company for assessment of the environment impact.

31. It is further prayed that upon acceptance of the aforesaid report the unit of Rice Mill and manufacturing of fly ash bricks of the respondent no. 14 running simultaneously from the same land be directed to be stopped.

32. It is further prayed that all permissions and/or consent granted by the any of the state and/or central authorities may be stayed until the state and/or central authorities declare and/or publish any legislation and/or regulation for running of Rice Mill and manufacturing of fly ash bricks simultaneously from the same compound.

33. It is further prayed that it is the need of the hour that Your Honour may pass appropriate directions for conducting a fresh inspection with notice upon the original applicant and the present petitioner and all other parties to the proceeding and preparation of a technical report with adequate sample upon vivid inspection so as to maintain the unbiased nature and outcome of such inspection.

34. It is further prayed that alternatively any independent central and/or state owned organization engaged in assessment of the environment impact be directed to inspect the Rice Mill and manufacturing of fly ash bricks from the inside of the

said unit and also inspect the surrounding agricultural and resident area in presence all the parties to this proceeding and collect the technical and non-technical data of environmental impact and audit the same and file its report before this Hon'ble Tribunal.

35. There is a strong prima facie case in favour of the applicant herein.

36. The balance of convenience and/or inconvenience is in favour of passing order as prayed for herein.

37. Unless an order is passed as prayed for herein, the applicant will suffer irreparable loss and injury.

38. That the instant application is being made within the limitation as under section 14 of the National Green Tribunal Act, 2010.

39. This application is made bonafide and for the ends of justice.

In the circumstances, your petitioner prays for the following reliefs:-

a) An order for acceptance of the report prepared by the RSP Green Development and Laboratories Pvt. Ltd. which is a QCI & NABET Accredited EIA and Mining Consultancy and ISO 9001:2015 & ISO 14001:2015 Certified Company for assessment of the environment impact on the grounds stated hereinabove;

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b) It is further prayed that upon acceptance of the aforesaid report the unit of Rice Mill and manufacturing of fly ash bricks of the respondent no. 14 running simultaneously from the same land be directed to be stopped.

c) It is further prayed that all permissions and/or consent granted by the any of the state and/or central authorities may be stayed until the state and/or central authorities declare and/or publish any legislation and/or regulation for running of Rice Mill and manufacturing of fly ash bricks simultaneously from the same compound.

d) It is further prayed that it is the need of the hour that Your Honour may pass appropriate directions for conducting a fresh inspection with notice upon the original applicant and the present petitioner and all other parties to the proceeding and preparation of a technical report with adequate sample upon vivid inspection so as to maintain the unbiased nature and outcome of such inspection.

19

e) It is further prayed that alternatively any independent central and/or state owned organization engaged in assessment of the environment impact be directed to inspect the Rice Mill and manufacturing of fly ash bricks from the inside of the said unit and also inspect the surrounding agricultural and resident area in presence all the parties to this proceeding and collect the technical and non-technical data of environmental impact and audit the same and file its report before this Hon'ble Tribunal.

f) Such further or other order or orders be passed and/or direction or directions be given as this Hon'ble Tribunal may deem fit and proper.

And your applicant, as in duty bound, shall ever pray.

Buddhadev ANKUR
Advocate

X

VERIFICATION

I, Buddhadeb Ankure, son of Ganesh Ankure, aged about – 38 years, by faith – Hindu, residing at Village - Gopinath Bati, P.O. – Gonna, Dwariapur, Barddhaman, West Bengal – 713128, do verify that I am the applicant in the instant application and I am well acquainted with the facts and circumstances of the instant case and the statements contained in paragraph 1 to 13 are true to my knowledge and rests are my humble submission before the Learned Tribunal.

Buddhadeb Ankure

DEPONENT

SAMIR BHATTACHARYA NOTARY CALCUTTA

AFFIDAVIT

I, Buddhadeb Ankure, son of Ganesh Ankure, aged about – 38 years, by faith – Hindu, residing at Village - Gopinath Bati, P.O. – Gonna, Dwariapur, Barddhaman, West Bengal – 713128, do hereby solemnly state and affirm as follows:-

1. That I am the applicant in the instant application and am well acquainted with the facts and circumstances of the instant case and I am competent to affirm this affidavit.

2. That the statements contained in paragraph 1 to 13 are true to my knowledge and rests are my humble submission before the Learned Tribunal.

Prepared in my chamber

Advocate

Buddhadeb Ankure

Deponent

Identified by me

Advocate

Samir Bhattacharya
Notary Govt. of India
Regd. No. 940/97
City Civil Court, Calcutta

Solemnly Affirmed and Declared before me U/S 139 CPC, U/S297 (C) CRPC

29.11.24

SAMIR BHATTACHARYA Notary NOTARIAL NOTARIAL CALCUTTA

NOTARY SAMIR BHATTACHARYA CALCUTTA Regd. No. 940/97 Govt. of India

29 NOV 2024

(2)

Annexure - 'A'

02/01/2024

To
The District Magistrate, Purba Bardhaman,
Purba Bardhaman-713101,

মাননীয় মহাশয়,

আপনার নিকট আমাদের সবিনয় নিবেদন এই যে আপনার জেলার অর্ন্তগত আউশগ্রাম থানার অধীন গোপীনাথবাটী গ্রামে কে. এম. এগ্রো. টেক. প্রাইভেট লিমিটেডের অধীন জমি জায়গার আশেপাশে রাইস মিলের যথেচ্ছ ব্যবহার ও ফ্লাই অ্যাশ ইঁট তৈরীর কাজ একই সাথে করা হচ্ছে নিম্ন ব্যাক্তিগনের নির্দেশে ও সম্মতিতে যথা ১) প্রদীপ সাউ, ২) প্রিতম সাউ, উভয়ের পিতা ভীম সাউ, সর্ব সাং গুসকরা (ফরেস্ট অফিসের সন্নিকট), থানা আউসগ্রাম, জেলা পূর্ব বর্ধমান, পিন নং ৭১৩১২৮ । যাহার ফলস্বরুপ স্থানীয় জনগনের ও বাইরে থেকে আগত জনসাধারনের স্বাস্থ ও সুরক্ষার বিষয়গুলিকে বিপন্ন করে তুলেছে এবং সেকারনে তাহারা দ্রুত অসুস্থ হয়ে পরছে ।

নিম্নে স্বাক্ষরকারীগন জানতে পেরেছেন যে উক্ত কে. এম. এগ্রো. টেক. প্রাইভেট লিমিটেড কোম্পানীর ডাইরেক্টর যথা ১) প্রদীপ সাউ, ২) প্রিতম সাউ ফ্লাই অ্যাশ ডাম্পিং করছেন এবং প্রয়োজনীয় লাইসেন্স ও অনুমতি ছাড়াই ফ্লাই অ্যাশ ইঁট তৈরীর কাজ চালিয়ে যাচ্ছেন এবং আইনের দ্বারা বাধ্যতামূলক যে নিয়মাবলী ও নিরাপত্তা সংক্রান্ত যে নির্দেশ আছে তাহা অনুসরন না করে বেআইনি ভাবে উপোরোক্ত ব্যবসা চালিয়ে যাচ্ছেন যা শিশু সহ স্থানীয় মানুষদের স্বাস্থ ও নিরাপত্তাকে বিপন্ন করে তুলেছে । শুধু তাই নয়, যে জমি থেকে ধান তৈরী করে চাল উৎপাদন করা হয় যা এলাকার দৈনন্দিন ব্যবহারের প্রধান উৎস তসেই জমিগুলোকে নষ্ট করে দিচ্ছে । স্থানীয় জনগনের সচেতনতার এটাই সঠিক সময় যে ধান উৎপাদনের একই এলাকায় মধ্যে ফ্লাই অ্যাশ বা ছাই জমা করে অবৈধভাবে বেআইনি কার্যকলাপ চালানো হচ্ছে তাহা স্পষ্টতই বিভিন্ন ধাতব পদার্থের ব্যবহার উদ্বেগনক ভাবে বৃদ্ধি পাচ্ছে এবং পশু, প্রানী ও পাখি ঐ সমস্ত দূষিত চাল বা চালজাত দরব্য গ্রহন করছে ।

উপোরোক্ত কারন ও বৃত্তান্ত মূলে আমরা নিম্ন স্বাক্ষর কারীগন নিম্ন ব্যাক্তিগনের নির্দেশে ও সম্মতিতে যথা ১) প্রদীপ সাউ, ২) প্রিতম সাউ, এই বেআইনি কাজ, অপকর্ম ও অন্যান্য আচরনের বিরুদ্ধে অবিলম্বে প্রয়োজনীয় ও উপযুক্ত পদক্ষেপ নেওয়ার জন্য আপনার নিকট আবেদন করছি এবং ন্যায় বিচারের স্বার্থে গ্রাম্য ও স্থানীয় জনগনের স্বার্থ ও নিরাপত্তা রক্ষার উদ্দেশ্যে জরুরী ভিত্তিতে বিষয় টি খতিয়ে দেখে ব্যবস্থা গ্রহন করিবার প্রার্থনা জানাইতেছি । দয়া করিয়ে এই বিষয়টি গুরুতর ও সবচেয়ে জরুরী হিসাবে বিবেচনার করার জন্য প্রার্থনা জানাইতেছি ।

RECEIVED WITHOUT VERIFICATION
05 JAN 2024
AUSGRAM-I DEV. BLOCK
Guskara, Purba Bardhaman

Received
Office of District Magistrate and
Collector, Purba Bardhaman
Date :- 08/01/24

SAMIR BHATTACHARYA ★ NOTARY, CALCUTTA ★

ধন্যবাদান্তে

Copy to :

Block Development Officer, Ausgram-1 Block, Guskara, Purba Bardhaman.

১) সোমনাথ চক্রবর্তী
২) [illegible]
৩) [illegible]
৪) Juthika Mondal Jodder
৫) সুখেন্দু গাঙ্গুলী
৬) BISWAJIT PODDER
৭) উজ্জ্বল মণ্ডল।
৮) [illegible]
৯) [illegible] Rana
১০) [illegible] রায়
১১) কল্পনা রায়
১২) চৈতালী আঁকুড়ে
১৩) অলোক আঁকুড়ে
১৪) Subhodip Mondal
১৫) কল্যাণ আঁকুড়ে
১৬) ফাল্গুনী মাত্র
১৭) সুমিত্রা আঁকুড়ে
১৮) মেনকা আঁকুড়ে
১৯) সান্ত্বনা আঁকুড়ে
২০) বিকাশ আঁকুড়ে
২১) [illegible]
২২) Yadab Garai
২৩) Somen Sekhar (Mukherjee)
২৪) গোপাল চন্দ্র মুখার্জী
২৫) Sambhu Nath Banerji
২৬) সুমন্ত গড়াই
২৭) সুপ্রিয়া চ্যাটার্জী
২৮) বাসুদেব মণ্ডল
২৯) দিলীপ বাউরী
৩০) ঘনশ্যাম বাউরী
৩১) রঘুনাথ আঁকুড়ে
৩২) [illegible]
৩৩) দীনেশ বাগদী
৩৪) শ্যামল বাউরী
৩৫) মৌমিতা চক্রবর্তী
৩৬) অলোক বন্ধু ধীর
৩৭) অর্ধেন্দু ধীর
৩৮) হারাধন আঁকুড়ে
৩৯) বুদ্ধদেব আঁকুড়ে
৪০) সনাতন আঁকুড়ে
৪১) সনাতন বাগদী

Dated : 02/01/2024

To
The District Magistrate, Purba Bardhaman,
Purba Bardhaman-713101.

Respected Sir,

We would like to bring to your attention that under your jurisdiction, in the Gopinathbati village under the Ausgram police station of your district, K.M. Agro Tech Private Limited is carrying out the work of using rice mill and fly ash bricks production in and around the land under their control following the instructions and regulations agreed upon by the following individuals: 1) Pradeep Sau. 2) Pritham Sau, both sons of Deem Sau, residing at Guskara (near Forest Office), Ghana Ausgram, Dist. Purba Bardhaman, PIN - 713128. As a result, the local residents and outsiders are being affected in terms of their health and safety, and they are falling ill rapidly.

The undersigned individuals have come to know that the Directors of the aforementioned K.M. Agro Tech Private Limited company, namely 1) Pradeep Sau, 2) Pritham Sau, are illegally dumping fly ash and carrying out the work of producing fly ash bricks without the necessary licenses and permissions, and they are conducting these activities in violation of the mandatory rules and regulations prescribed by the law, which is endangering the health and safety of the local people, including children. Not only that, but they are also destroying the lands from which paddy is grown, which is the main source of daily livelihood in the area. The awareness of the local people is the right time when illegal activities such as fly ash or waste are being deposited in the same area of rice production. It is clear that the use of various metallic substances is increasing in a disturbing manner and all animals and birds are consuming all those contaminated rice or rice products.

Based on the above reasons and examples, we, the undersigned, in accordance with the instructions and consent of the following individuals, namely 1) Pradeep Sau, 2) Pritham Sau, are applying to you for necessary and appropriate steps to be taken immediately against these illegal activities, negligence, and other misconduct. I request you to consider this matter urgently and take necessary measures to protect the interests and security of the rural and local people in the interest of justice. I request you to consider this matter as serious and most urgent for consideration.

Page 1 1

SEAL
RECEIVED WITHOT VERIFICATION
Sd/- 05 JAN 2024
AUSGRAM-I DEV. BLOCK
Guskara, Purba Bardhaman

SEAL
Sd/-
Received
Office of District Magistrate and
Collector, Purba Bardhaman
Date : 08.01.2024

CC to: Block Development Officer,
Ausgram -1, Guskara, Purba Bardhaman

thanking you,
-s/d-

BHATTACHARYA NOTARY, CALCUTTA

Annexure - B'

Item No.07 Court No.1

BEFORE THE NATIONAL GREEN TRIBUNAL
EASTERN ZONE BENCH, KOLKATA
(THROUGH PHYSICAL HEARING WITH HYBRID MODE)

Original Application No.107/2023/EZ
(I.A. No.13/2024/EZ)

Soumen Chakraborty — Applicant(s)

Versus

The Principal Secretary,
Environment Dept. Govt. of West Bengal & Ors. — Respondent(s)

Date of hearing: 18.03.2024

CORAM: **HON'BLE MR. JUSTICE B. AMIT STHALEKAR, JUDICIAL MEMBER**
HON'BLE DR. ARUN KUMAR VERMA, EXPERT MEMBER

For Applicant(s) : Mr. Deepnath Roy Choudhury, Advocate a/w
Mr. Saunak Sengupta, Advocate (in Virtual Mode),
Mr. Khondher Samiul Haque, Advocate,
Mr. Bhaskar Dwivedi, Advocate and
Mr. Rahul Naskar, Advocate

For Respondent(s) : Mr. Sudip Kumar Dutta, Adv. for R-1,2,7,9,11,13&17(in Virtual Mode),
Mr. Dipanjan Ghosh, Advocate for R-4, 5 & 8,
Mr. Ashok Prasad, Advocate for R-6,
Mr. Md. Karim Warsi, Advocate a/w
Mr. Arpita Mondal, Advocate and
Mr. Md. Rahim Waris, Advocate for R-14 to 16,
Mr. Kaushik Bhatta, Advocate a/w
Mr. Supratim Bhattacharjee, Advocate (in I.A. No.13/2024/EZ)

ORDER

1. Mr. Deepnath Roy Choudhury, learned Counsel appearing on behalf of the Applicant prays for and is granted further four weeks time for filing rejoinder affidavit.

2. Mr. Md. Karim Warsi, learned Counsel appearing on behalf of the Respondent Nos.14 to 16, states that he has not received the copy of the affidavit filed by the State Respondents. Learned Counsel may download the same from the NGT Website/Portal.

3. The Counsel for the parties shall exchange the copies of their affidavits among themselves before the next date of listing.

4. **List on 08.05.2024.**

I.A. No.13/2024/EZ:-

1. This Interlocutory Application has been filed by the Applicant-Buddhadeb Ankure, to allow the Applicant to intervene in the present proceedings.

2. The only objection raised by Mr. Md. Karim Warsi, learned Counsel for the Respondent Nos.14 to 16, Private Respondents, is that the representation made by the proposed intervener was sent on 02.01.2024 which was received in the Office of the District Magistrate, Purba Bardhaman on 05.01.2024.

3. Mr. Kaushik Bhatta, learned Counsel for the Intervener Application submits that the Applicant-Buddhadeb Ankure, was not aware that there was an Original Application No.107/2023/EZ pending in the Tribunal and, therefore, he submitted a representation before the District Magistrate, Purba Bardhaman on 02.01.2024 but when he came to know that the Original Application is already pending on the same issue, he has filed the Intervener Application to highlight certain additional grounds relating to environmental violations by the Respondent Nos.14 to 16.

4. Mr. Deepnath Roy Choudhury, learned Counsel for the Applicant states that he has no objection if the Intervener Application is allowed.

5. We, accordingly, allow the I.A. No.13/2024/EZ.

.....
B. Amit Sthalekar, JM

.....
Dr. Arun Kumar Verma, EM

March 18, 2024,
Original Application No.107/2023/EZ
(I.A. No.13/2024/EZ)
MN

Environment Impact Study

On

1KM radius of a rice-mill

M/s K. M. Agro Tech Private Limited

Latitude : 23°28'31.97"N

Longitude: 87°42'24.82"E

Report Prepared by

RSP Green Development and Laboratories(P) Ltd.

(A QCI-NABET Accredited Organisation)

Laboratory Assist by

Qualissure Laboratory Services

(A NABL Accredited Laboratory)

RSP GREEN DEVELOPMENT AND LABORATORIES PVT. LTD. HOWRAH

CONTENT

LIST OF ANNEXURES

SAMIR BHATTACHARYA ★ NOTARY, CALCUTTA ★ Regd. No. 040097 Govt. of India

Executive Summary

Introduction

We at RSP Green have taken on the task of conducting a ground level investigation of the environmental impact of the "Fly-ash brick manufacturing unit" within the same premises of a rice mill, based on a commission by Sri Buddhadeb Ankure, of Gopinath Bati, Gonna Damapur, Damapur, Purba Bardhaman, West Bengal-713128, dated 05.03.2024. It is recognized that a legal proceeding between our client Sri Buddhadeb Ankure and the Principal Secretary, Environment Department, Government of West Bengal, & others, is pending before the Hon. National Green Tribunal.

After reviewing every legal document that has been made accessible up to this point, we have discovered that there are certain grey zones that fall between what is considered to be right and wrong in terms of environmental jurisprudence. At RSP, we have been attempting to look into the true state of the environmental parameters based on samples that were taken from the factory site under investigation at pertinent points in the hamlet. This was also done to see whether the abnormalities in the environmental parameters posed a health risk.

Client Buddhadeb Ankure has submitted a request in Original Application No. 107 of 2023/EZ in the National Green Tribunal Eastern Zone Bench, III B, 3rd Floor, to be added as a party in the matter filed by Representing Sri Soumen Chakraborty, relating to the approval of M/s K. M. Agro Tech Private Limited to establish a "fly-ash brick manufacturing unit", on the same property as a rice mill.

Even after all parties have, at various points in time, produced affidavits and counter-affidavits in response to the Hon'ble NGT's directives, the controversial manufacturing facility continues to pollute the village's environment, as well as the lives of people, animals, and plants.

29A

Executive Summary

Introduction

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1.1 Scope of the Report

The report will highlight following aspects to establish the statutory environmental non-compliance of the abovementioned industrial units and the resulting environmental and health hazards taking place in nearby localities.

1. Location Detail of the above-mentioned project site
2. Sensitivity assessment of the project location in environmental terms
3. Existing manufacturing scenario of the industrial unit
4. Assessment of potential emission and discharges from the industrial unit
5. Required Environmental Management Facilities at site
6. Existing Environment Management Practice of the industrial unit
7. Overview of Literature Assessment on potential Environmental Concerns
8. Potential Short Term and Long-Term Health Impacts on Nearby Habitants
9. Study of existing impact on micro-environment
10. Discussion on survey method on local demography and socioeconomics
11. Study of health impacts on nearby habitants based on primary survey
12. Evaluation on environmental and health impacts
13. Recommendations
14. Conclusion and way forward.

29A

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Chapter -1
Location Detail of Project Site

1.1. Location Details:

K.M. Agro Tech Private Limited and OM Sun Bricks located at Village-Gopinath Bati, P.O-Gonna Dariapur, P.S – Ausgram, Pin-713128, Purba Bardhhaman, West Bengal. Latitude: 23°28'31.97"N & Longitude: 87°42'24.82"E.

According to Census 2011 information the location code or village code of Dwariapur village is 319016. Dwariapur village is located in Ausgram I subdivision of Barddhaman district in West Bengal, India. It is situated 9.3 km away from sub-district headquarter Ausgram (tehsildar office) and 37.7km away from district headquarter Barddhaman. As per 2009 stats, Dignagar II is the gram panchayat of Dwariapur village.

The total geographical area of village is 507.87 hectares. Dwariapur has a total population of 3,571 peoples, out of which male population is 1,764 while female population is 1,807. Literacy rate of dwariapur village is 64.46% out of which 70.46% males and 58.61% females are literate. There are about 807 houses in Dwariapur village.

Gushkara is nearest town to Dwariapur for all major economic activities, which is approximately 10km away.

Image 1.1: Satellite Image of Project Site

Image 1.2: Boundary of Project Site

Chapter -2

Environmental Sensitiveness of Project Location

Sensitivity assessment of the project location in environmental terms

Image 2.1.: Satellite Image of 5 km radius area of the project site of May 2024

Image 2.2.: Satellite Image of 5 km radius area of the project site of March 2014

Image 2.3.: Satellite Image of 1 km radius area of the project site of May 2024

Image 2.4.: Satellite Image of 1 km radius area of the project site of March 2014

The 5 Km radius satellite images indicate the existence of green belt, agricultural land, residential settlements and wetlands surrounding the industry.

The 1 km radius satellite images indicate substantial growth of residential settlements in this village.

Chapter -3
Facilities at Project Site

3.1. Demographic Profile:

According to 2011 census report Dwariapur had a total population of 3,571, of which 1,764 (49%) were males and 1,807 (51%) were females. Population below 6 years was 460. The total Number of literates in Dwaripur was 2,302 (74.00% of the population over 6 years).

3.2. Land use of Dwaripur Village:

Based on available data for 2009, Dwariapur (P) has a total area of 507.87 hectares. There are 458 ha areas consist of sown/agricultural land. A 120-hectare area is un-irrigated. There are 338 ha area consist of irrigated land. Among them canal water used to irrigate about 192.37 hectares area while wells and tube wells irrigate about 114 hectares. Lakes and tanks irrigate about 28.84 hectares. Other water sources irrigate about 2.79 hectares. There are roughly 11.35 ha of non-agricultural use and 5.84 hectares is culturable waste land.

3.3. Important schools of Dwaripur Village:

- There are government pre-primary schools in the village Dwariapur (P).
- There are government primary schools in the village Dwariapur (P).
- There are no private or government middle schools in the village. However, there is a private middle school in Gushkara, which is less than approx 5 kms away from Dwariapur (P).
- There are no private or government secondary schools in the village. However, there is a private secondary school in Gushkara, which is less than approx. 5 kms away from Dwariapur (P).
- There are no private or government senior secondary schools in the village. However, there is a private senior secondary school in Gushkara, which is less than approx. 5 kms away from Dwariapur (P).
-

3.4. Healthcare Facilities in Dwariapur Village:

- There is a community health center less than approx. 5 kms away from Dwariapur (P).
- There is a primary health center less than approx. 5 kms away from Dwariapur (P).
- There is a primary health sub-center with 1 doctor and 2 paramedical staff in the village Dwariapur (P).
- There is no maternity and child welfare center in the village Dwariapur (P) or anywhere in the nearby villages.

SAMIR BHATTACHARYA ★ NOTARY, CALCUTTA ★ Regd. No. 240/97 Govt. of India

RSP GREEN DEVELOPMENT AND LABORATORIES PVT. LTD. HOWRAH

Chapter -4
Manufacturing Setup in Industrial Units

The industrial units have a rice milling unit and a fly ash-based brick manufacturing unit under same premises. The manufacturing processes of both the unit are discussed below:

4.1. Production Process in Rice Mills:

4.1.1. Pre -Cleaning

Paddy which is stored in Bags is brought to the Unloading Area where bags are cut manually and Paddy is unloaded on Conveyers. It is then lifted via. Bucket Elevators to the Silos for Storage prior to Pre-Cleaning. Paddy stored in Silos is again lifted via. Bucket Elevators to the Pre-Cleaning Process. Prior to the actual milling operation, the paddy received from Silos is cleaned. Foreign matter or impurities are removed to protect the processing equipment and improve the final product. The impurities can be classified into large size impurities, small size impurities and impurities of about the same size as the paddy grains. Large impurities normally consist of rice straw, panicles, bag strings, soil stones, and sometimes iron parts. Small impurities consist of dust, sand, soil, weed seeds, insects, and small stones. Impurities of about the same size as the paddy grains can be empty grains, stones and iron particles. In the pre-cleaning process steps, different types of equipment are used depending upon size and weight of impurities. Small & large sized impurities are removed using sieving principle whereas; lighter/heavier impurities of similar size are removed using gravity separation or vibratory type screening machines as shown in Figure 4.1. Foreign material about the same weight and size as the paddy grain is difficult to remove and it is presumed to disintegrate into smaller sizes during the sub-sequent stages. The cleaned paddy is stored in bins & sent to subsequent processing.

4.1.2. De-stoning

Paddy after cleaning goes for de-stoning into the De-stoner machines for removal of impurities like stones as shown in figure4.2. After De-stoning operation paddy is taken to further milling.

Fig-4.1- Vibratory Screens

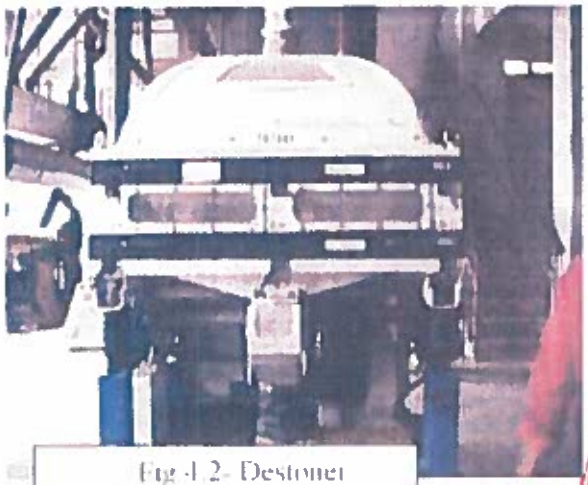

Fig-4.2- Destoner

All the above diagrams are indicative for a parboiling rice mill as given in Central Pollution Control Board Report.

4.1.3 Parboiling of Pre-Cleaned Paddy

Parboiling is one of the latest well-developed pre-milling conditioning treatments given to paddy to improve its nutritional & cooking quality. In parboiling the paddy is soaked in water and subsequently steamed and dried, before milling as shown in figure 4.3. This helps in minimizing the breakage of rice and reducing the loss of nutrients during milling. There are various methods

of parboiling practiced in India; some are conventional methods while some are modern technology based methods. The conventional method of parboiling includes single boiling, double boiling and CFTRI hot soaking method.

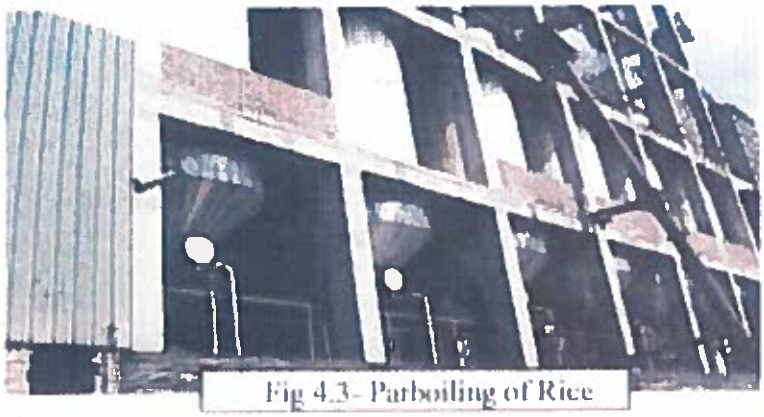

Fig 4.3- Parboiling of Rice

The above diagrams are indicative for a parboiling rice mill as given in Central Pollution Control Board Report.

The modern technology of parboiling includes chromate-soaking method, pressure parboiling method, the modified pressure parboiling method and dry heat parboiling. The benefits of the most of modern technologies are (i) No smell problem, (ii) Reduction in time of processing and (iii) Reduction in paddy drying time due to less moisture content in the paddy.

4.1.4. Drying of Parboiled Paddy

Paddy, after parboiling, contains high moisture due to soaking and steaming, it may contain 35 to 40% moisture. After pressure parboiling, it may contain 20% to 30% moisture. In either case, it needs to be dried quickly to about 14% moisture for safe storage or for milling. Drying can be done either in the sun or in the hot air dryer as shown in figure 4.4 and 4.5. But whatever method of drying is employed, caution is to be exercised so that milling quality of paddy is not damaged. If drying is not proper, parboiled paddy can give very high breakage during milling. Generally,

most mills employ a hot air type of drying. Hot air is passed through the paddy till it is dried to desired extent.

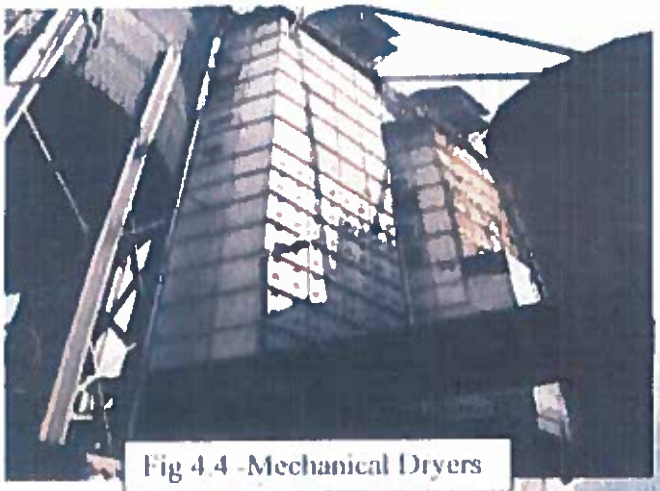

Fig 4.4 -Mechanical Dryers

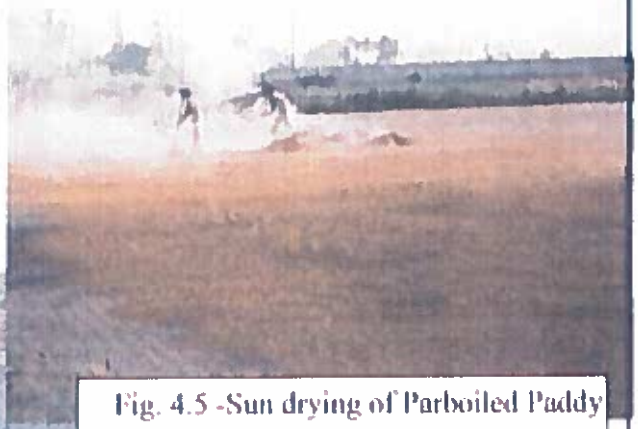

Fig. 4.5 -Sun drying of Parboiled Paddy

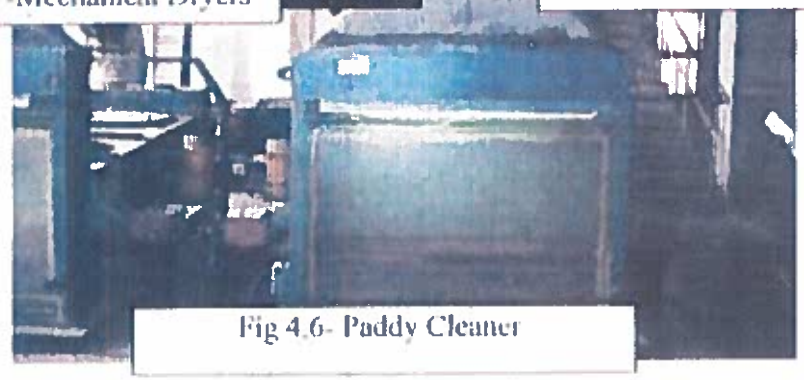

Fig 4.6- Paddy Cleaner

All the above diagrams are indicative for a parboiling rice mill as given in Central Pollution Control Board Report

4.1.5. Milling Process

The milling process broadly consists of final cleaning, de-husking/hulling, husk separation and Whitening/polishing.

4.1.5.1. Final Cleaning of Parboiled Paddy:

Before De-husking, Paddy is cleaned again in Paddy Cleaners to remove impurities still present in the Paddy after Parboiling as shown in figure 4.6.

4.1.5.2. Hulling/ Dehusking:

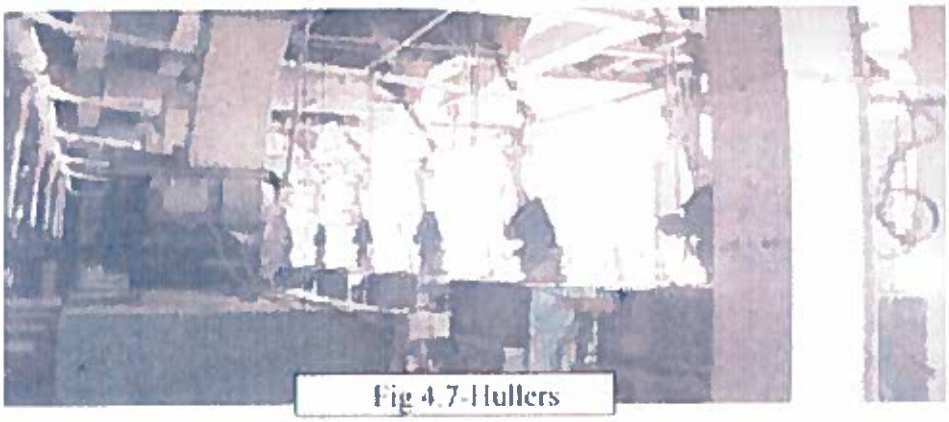

Fig 4.7-Hullers

The above diagrams are indicative for a parboiling rice mill as given in Central Pollution Control Board Report

The objective of a hulling/de-husking operation is to remove the husk from the paddy grain with a minimum of damage to the bran layer and, if possible, without breaking the brown rice grain. Since the structure of the paddy grain makes it necessary to apply friction to the grain surface to remove the husk; it leads to breaking of some of the rice.

Hulling machines are known by different names, such as shellers, hullers, de-huskers, huskers and hulling mills. Most commonly these machines are called "hullers". The paddy is fed into the center of the machine through a small hopper as shown in figure 4.7. A vertically adjustable cylindrical sleeve regulates the capacity and equal distribution of the paddy over the entire surface of the rotating disc. By centrifugal force the, paddy is forced between the two discs and as a result of pressure and friction most of the paddy is dehusked (hulled).

4.1.5.3. Husk Separation:

The discharge from a rice huller is a mixture of de-husked rice, husk and paddy. The mixture is transferred to screen for the separation of husk. A separator is used to screen the remaining paddy from the de-husked rice, generally called "Aspirators" as shown in figure 4.8.

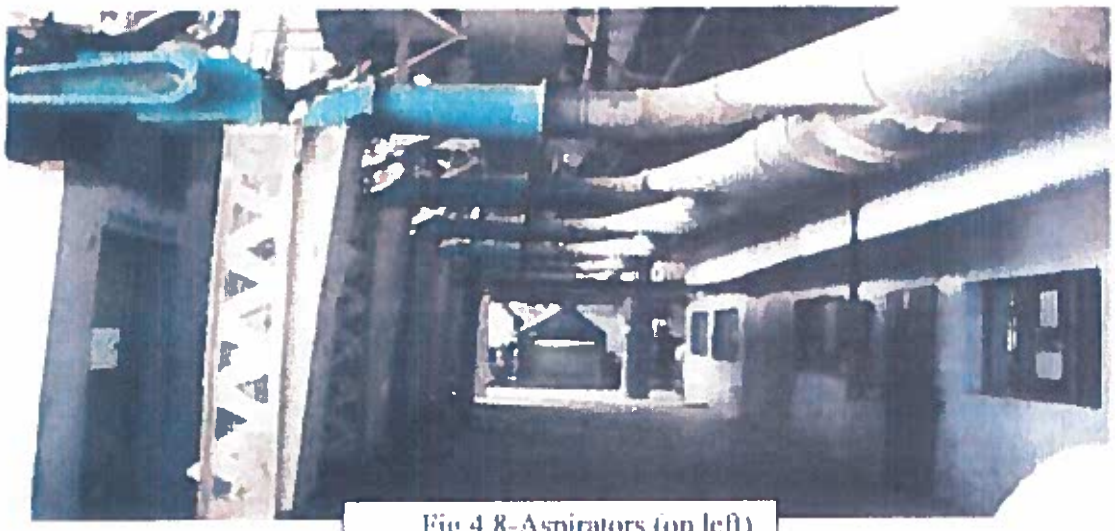

Fig 4.8-Aspirators (on left)

All the above diagrams are indicative for a parboiling rice mill as given in Central Pollution Control Board Report

4.1.5.4. Whitening and polishing:

In the process of whitening, the silver skin and the bran layer of the brown rice are removed. During polishing of the whitened rice, the bran particles still sticking to the surface of the rice are removed and the surface of the rice is slightly polished to give it a glazed appearance. Three kinds of whitening machines are widely used in the rice processing industry. They are:

i. the vertical abrasive whitening cone;

ii. the horizontal abrasive whitening machine; and

iii. the horizontal jet pearler.

4.1.5.5. Sorting, Grading and Packing:

The whitened and polished rice is sorted with the help of sortex machines which rejects the rice on the basis of their color. The sorted rice is graded based on their length and packed for dispatch.

A schematic process flow diagram of parboiling rice production is given in figure 4.9.

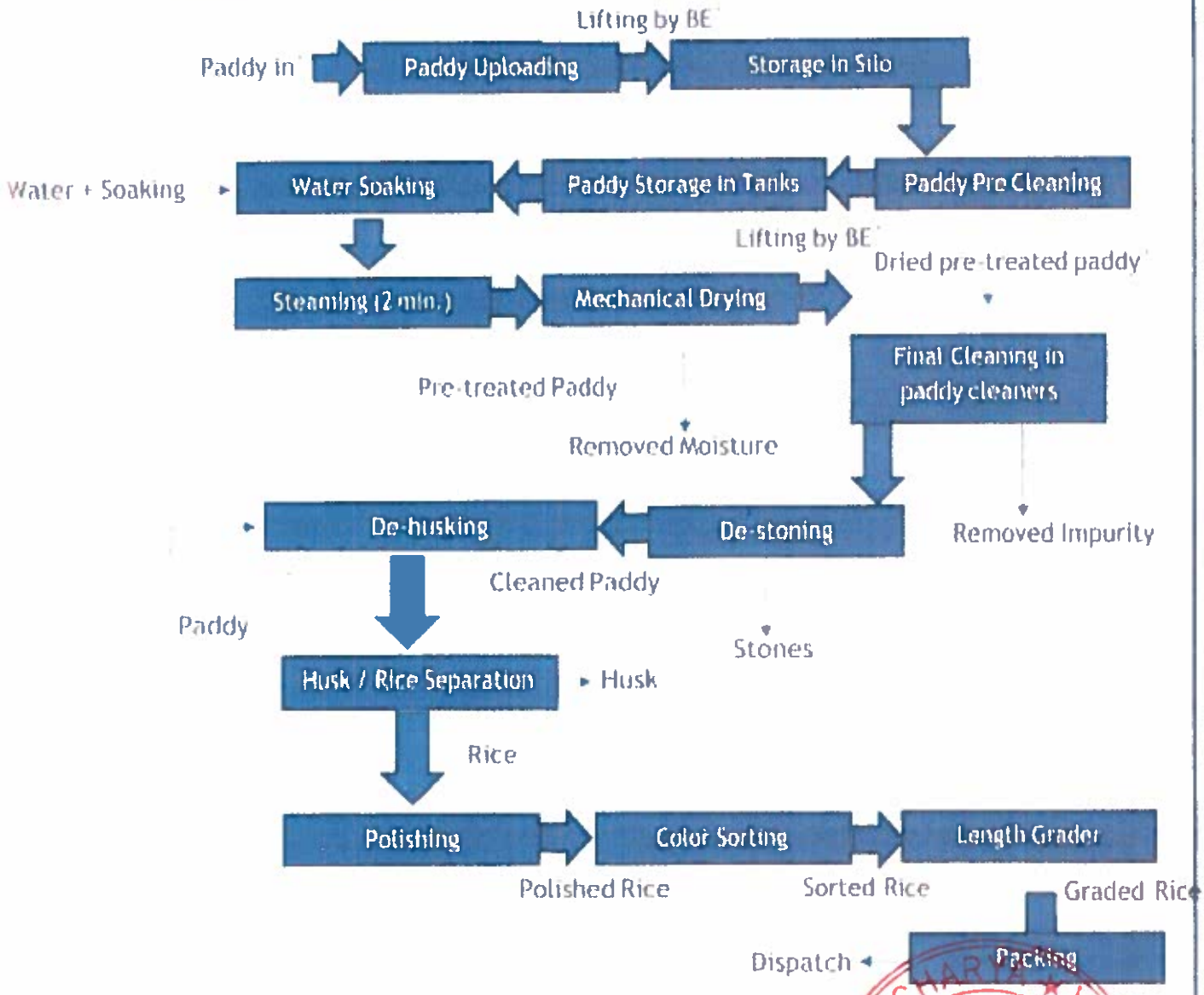

Fig: 4.9 - PROCESS FLOW DIAGRAM OF PARBOILING RICE PRODUCTION

4.2. Production Process in Brick from Fly Ash:

4.2.1. Raw Material:

4.2.1.1. Fly Ash:

The majority of the raw material used to make fly ash bricks is fly ash. Thus, it has substantial control over the final product's attributes. Since the ash is not plastic, one needs to add a binder, such as Portland cement or plastic clay. The amount of fly ash varies from 60 to 80%. When ground or powered coal is used as boiler fuel in thermal power plants, a fine residue known as fly ash is produced. It can be used as a building material in a variety of ways. The nation's thermal power plants discard a lot of fly ash, which might be used to partially replace cement but is instead thrown away.

4.2.1.2. Lime:

The most significant component that combines with silica, alumina, and other ingredients found in fly ash to make the binder under hydrothermal conditions is lime with a high calcium content. Burnt lime, on the other hand, is not preferred since it stains easily. The size of the lime particles should be such that they coat the mix's grains and are evenly distributed.

4.2.1.3. Gypsum:

This too is an industrial waste. This is available at Fertilizer Plant as in industrial wastes.

4.2.1.4. Sand / Crusher Dust:

Sand is used to somewhat strengthen bricks and act as an economizer. Sand is purchased nearby. Sand can also be successfully substituted with crusher dust.

4.2.2. Process of Manufacturing

The Process of manufacture is simple and suitable to start. A mix of Fly Ash, Cement, Gypsum and Sand/Crusher Dust are automatically weigh batched in a batching plant.

4.2.2.1. Loading of Raw materials-

Mini Loader Loads materials into Batching plant

4.2.2.2. Automatic Batching –

The Raw materials are automatically weighed as per the preset weights by means of Load cells and its control circuit. Cement, if it is available in Bulk, then silo and screw controller isused to auto weight. Otherwise, the batching is programmed as per 1 bag of cement.

4.2.2.3. Mixing -

From the batching plant the mixture hopper pulls the materials and then the mix is blended homogenously and intimately in a semi wet form in a Twin shaft mixture. The Water is automatically added as per time set. The TWIN SHAFT mixture ensures that a perfect mix is done in the shortest possible time.

4.2.2.4. Carrying to Brick machine -

The mix is carried to the casting machine by means of conveyer belt.

4.2.2.5. Automatic Brick Making-

There is a series of operations which is achieved by automatic PLC system. Pallet is pulled into the Machine. The mix is then collected and fed into the machine moulds. There is a 1 boggy which uniformly spreads the materials in the moulds. Automatic PLC controlled Vibration and hydraulic pressure is given for a while and bricks are cast on the pallets. The dual application of Pressure and vibration (in a patent pending micro-sequence application) ensures perfect compaction with best quality of bricks.

4.2.2.6. Automatic Stacking -

The pallets along with the freshly cast bricks are rolled on a roller platform to the pallet stacker. The Pallet stacker stacks the pallets along with the bricks automatically and the

4.2.2.7. Forklift shifting-

The Final stack of 5 to 10 pallets and bricks are lifted with a Fork Lifter and carried to the drying bay/room for 24 Hours for initial setting.

4.2.2.8. Curing -

Soon after the initial setting, the Blocks/ Bricks are stacked for curing in layers. The layers are stacked in a way to enable water and air to go all around, to ensure proper curing and drying. The curing process continued for 7 days. The blocks are allowed to normally dry for a day. Now they are ready for dispatch. Alternatively, the blocks/bricks can be steam cured for 8 hours or mist cured for 24 hours immediately after production and made ready for dispatch immediately.

4.2.2.9. Dispatch -

The cured bricks can be dispatched to the market.

Following Process Flow Diagram represents the manufacturing process of the fly ash ,based brick plant:

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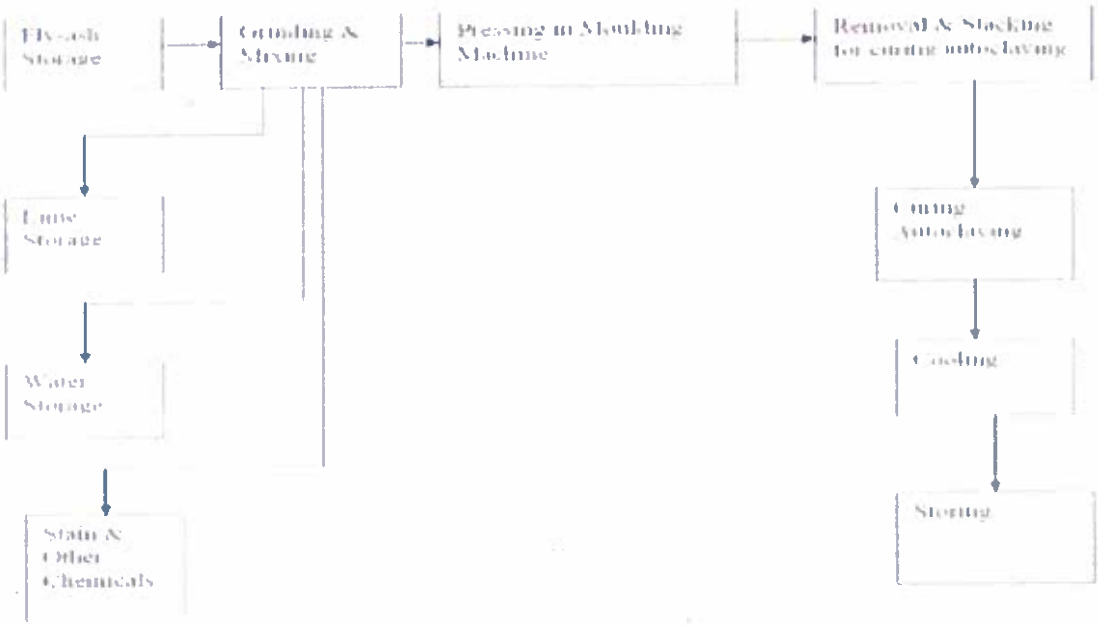
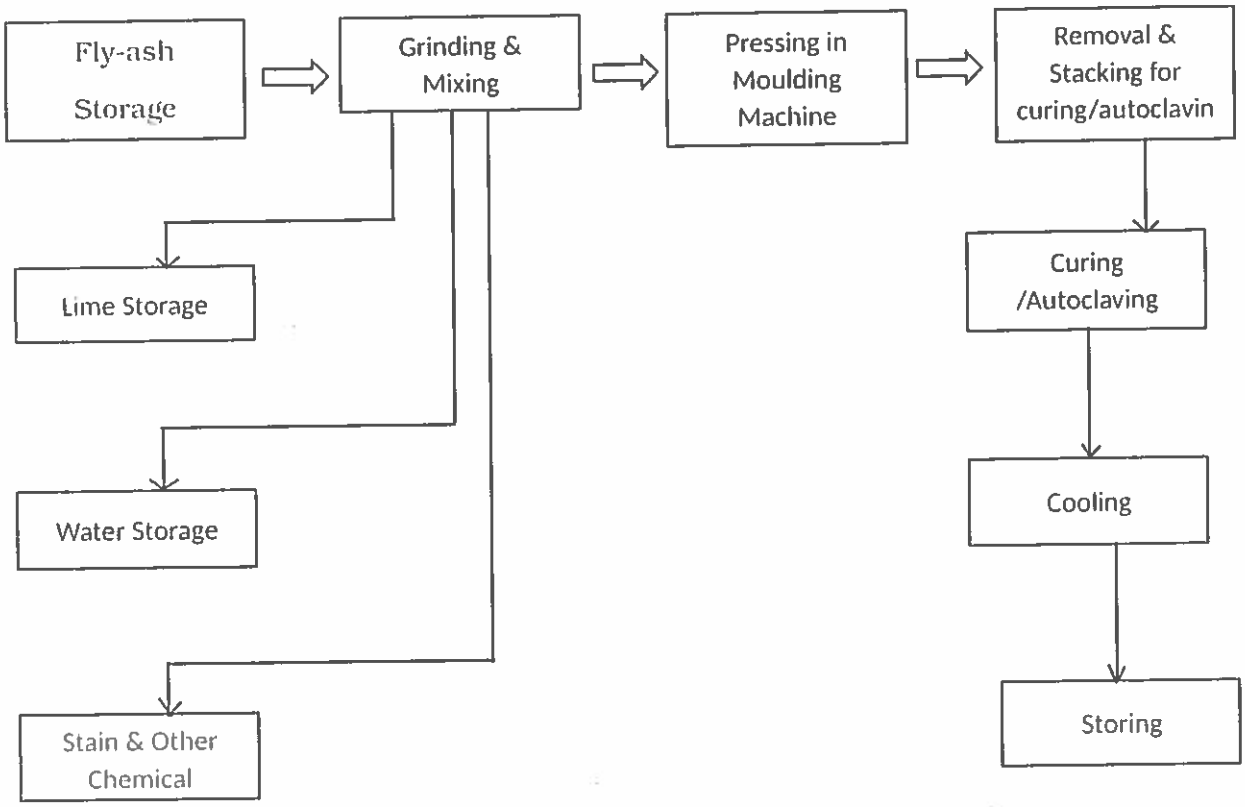
Environment Impact Study

On 1KM radius of a rice-mill M/s K. M. Agro Tech Private Limited



Environment Impact Study

On 1 km radius of a rice-mill M/s. K.M. Agro Tech Private Limited



Chapter -5

Potential Emission from the Industrial Unit

5.1. Environmental Pollution Prospect of Rice Mill:

5.1.1. Fugitive Emissions from Rice Mills

5.1.1.1. Sources of Fugitive Emissions in Rice Mills

In rice mills fugitive emissions are generated from various sections during handling of paddy; cleaning & milling of paddy; handling and storage of husk and handling, storage and disposal of boiler ash due to various activities in the mills. A brief description of sources of fugitive emissions are given below.

5.1.1.2. Fugitive Emission during handling of Paddy from Unloading to Silo.

- During Unloading of paddy (cutting open the Gunny bags and releasing Paddy)
- At different stages of lifting and discharging of paddy rice through bucket elevator
- Transfer points (belt to belt; belt to elevator; elevator to silo)
- Storage Bins (emissions from top of Silo, as Paddy is discharged by Bucket Elevator)
- Locations of free fall of paddy (fine dust getting airborne due to free fall)

5.1.1.3. Fugitive Emission during Cleaning of paddy:

- During pre-cleaning (mostly in Rotary Drums- fines separated due to movement and free fall of Paddy)
- During paddy cleaning in paddy cleaner/ vibrating screen (due to rigorous movement of paddy, fines are generated)
- De-stoner machines (fines get extracted)
- Final cleaning in Paddy cleaners (fines are extracted out).

Fig 5.1 Paddy Unloading

Fig 5.2(a) - Bucket Elevator

Fig 5.2(b) Conveyer

Fig 5.3-Silo

Fig 5.4-Paddy Cleaner

Fig 5.5-Vibratory Screens

All the above diagrams are indicative for a parboiling rice mill as given in Central Pollution Control Board Report.

5.1.1.4. Fugitive Emissions during Milling of paddy

- At different stages of lifting and discharging of paddy /rice through bucket elevator (fines get airborne due to movement, fall of Paddy/ Rice)
- During de-husking of paddy in Hullers (fines are generated due to breaking of Paddy)
- At Aspirators used for husk removal (fines are extracted)
- During polishing of rice (fines are generated due to polishing)
- During grading of rice in rice grader (fines carried along with rice)

Fig 5.6-Conveyer

Fig 5.7-De-huskers

Fig 5.8-Polishers & Graders

Fig 5.9-Aspirators

All the above diagrams are indicative for a parboiling rice mill as given in Central Pollution Control Board Report.

5.1.1.5. Fugitive Emissions from Handling & Storage of Rice Husk:

- During conveying of Rice Husk from milling section to husk storage area (Unseparated fines are blown along with Husk)
- At Rice Husk Storage area (fines get airborne due to wind currents)
- During Conveying and Handling of Rice Husk to Boiler Section (fines contained

in the dry husk, get airborne during transport/ conveying & free fall of Husk

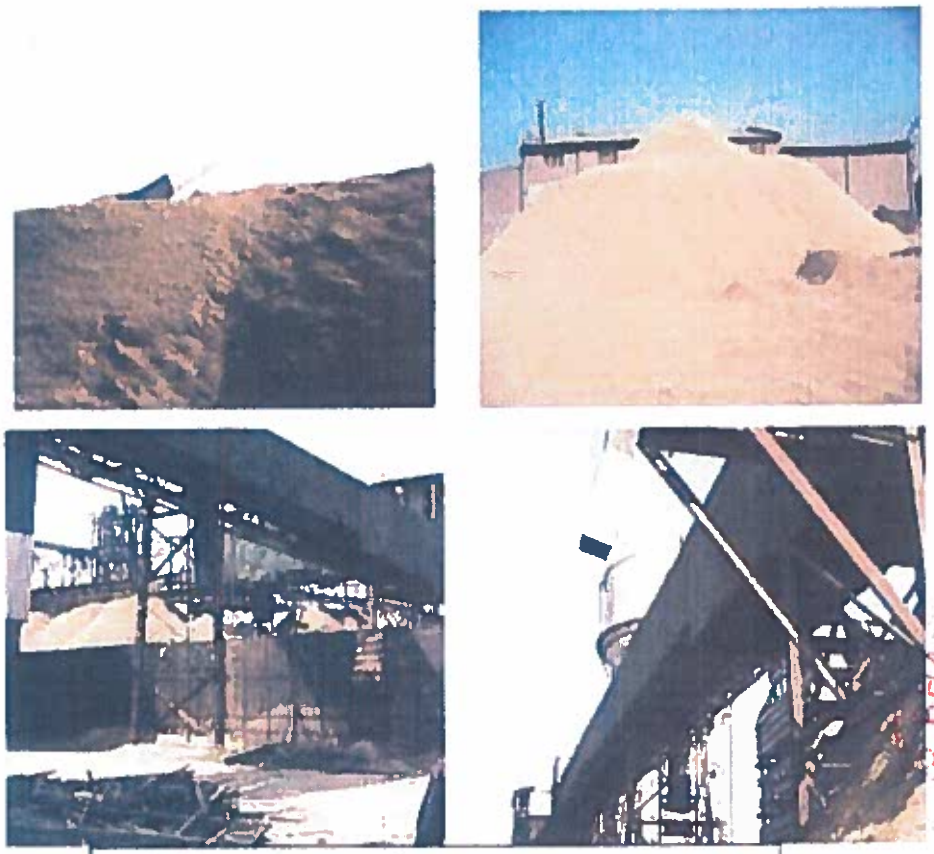


Fig 5.10-Rice Husk Storage Areas and conveyance

All the above diagrams are indicative for a parboiling rice mill as given in Central Pollution Control Board Report

5.1.1.6. Fugitive Emissions of Fly Ash in the Boiler Section:

- Through leakages in the ducts/flanges from boiler to stack (fines escape to atmosphere
- Fall of coarser Boiler Fly Ash from Stack (coarser Fly Ash particles fall on ground in the vicinity of Stack)
- From temporary Ash Storage (fugitive emissions due to wind blowing of Fly Ash

temporarily stored at site)

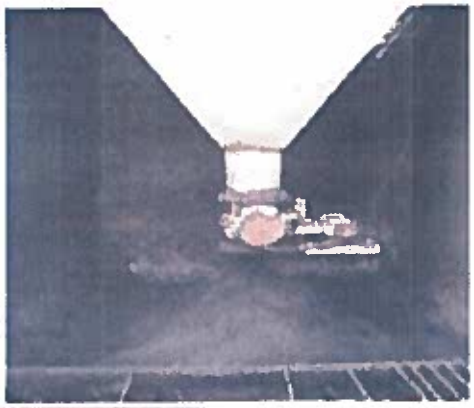


Fig 5.11-Boiler section and ash generation

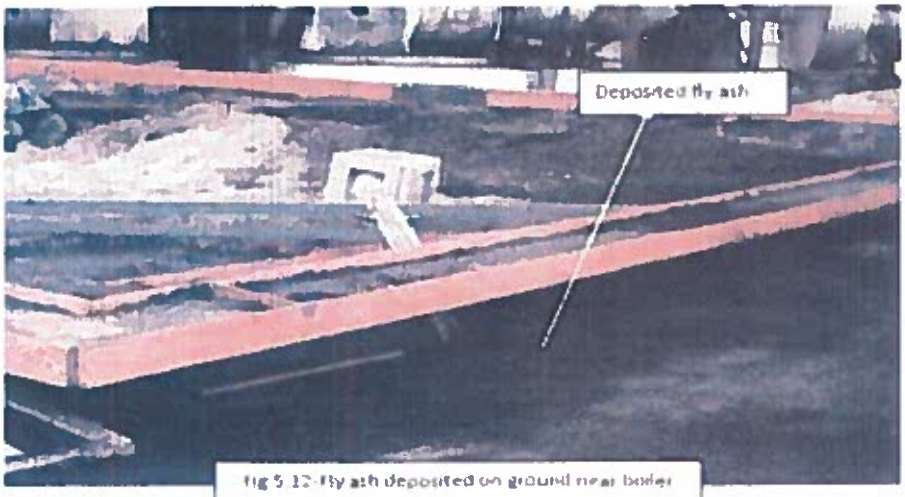


Fig 5.12-Fly ash deposited on ground near boiler section due to Fugitive Emissions

All the above diagrams are indicative for a parboiling rice mill as given in Central Pollution Control Board Report.

5.1.1.7. Fugitive Emissions from temporary Ash Storage and Disposal areas:

- Boiler ash conveyance from boiler to trolley (carryover of Fines during conveyance, free fall of Ash)
- From open temporary ash storage area (fines get airborne due to wind currents)
- From uncovered and unprotected disposal sites (as the moisture dries away, or top-soil layer gets removed, fines in the dry Ash get airborne due to wind currents)

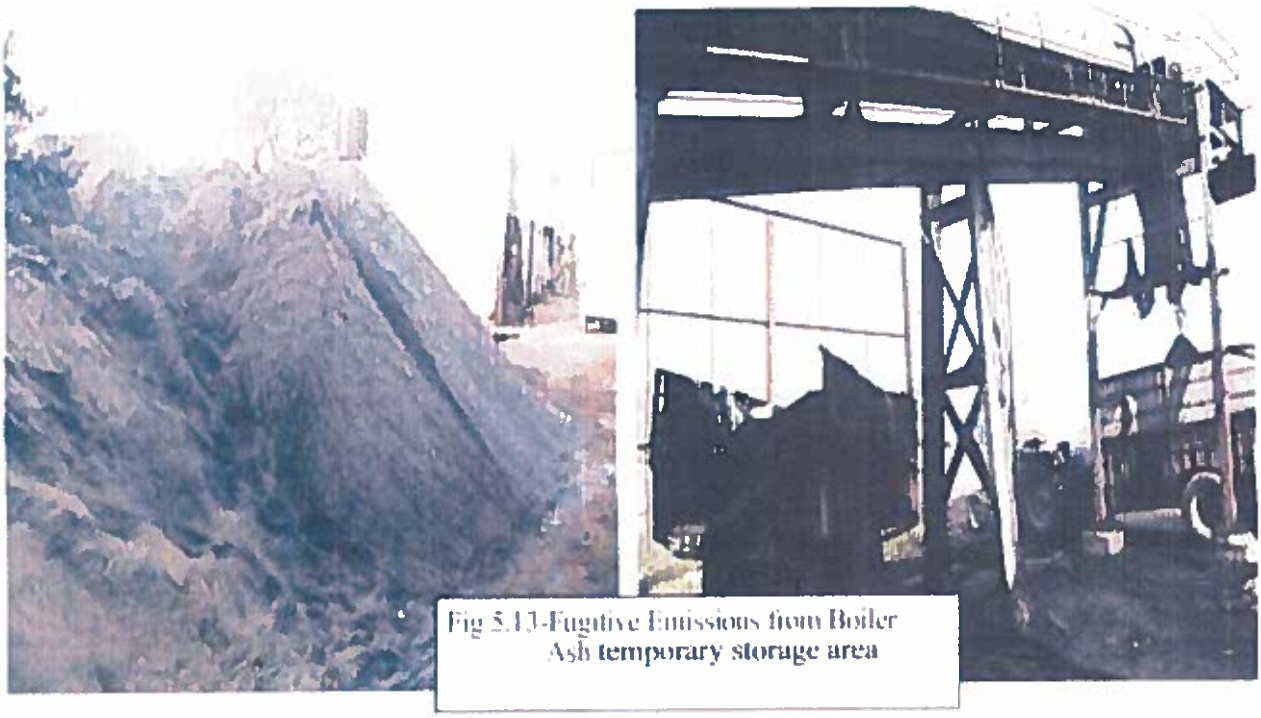


Fig 5.13-Fugitive Emissions from Boiler Ash temporary storage area

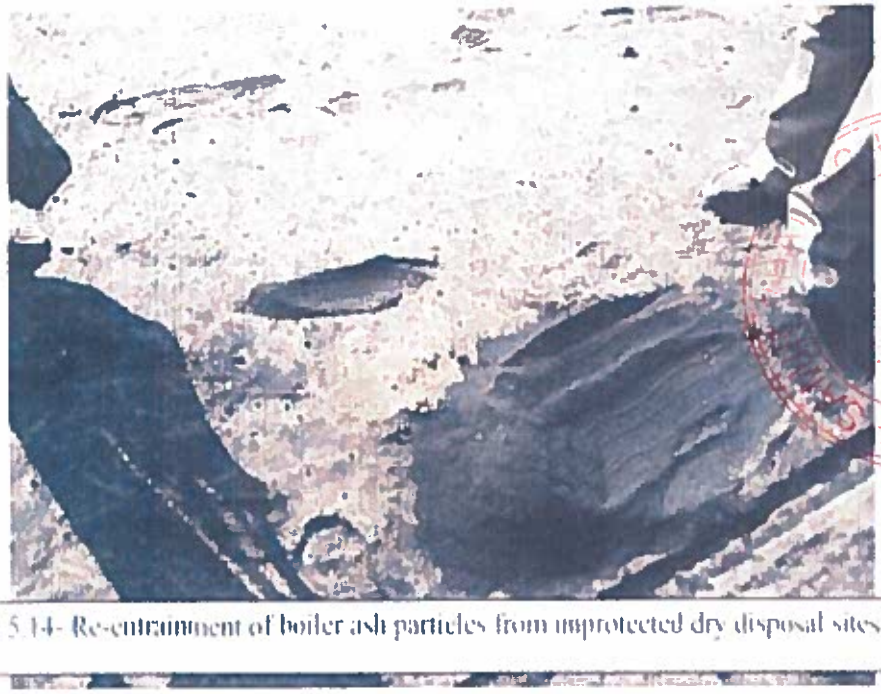


Fig 5.14- Re-entrainment of boiler ash particles from unprotected dry disposal sites

Environment Impact Study

On 1KM radius of a rice-mill M/s K. M. Agro Tech Private Limited

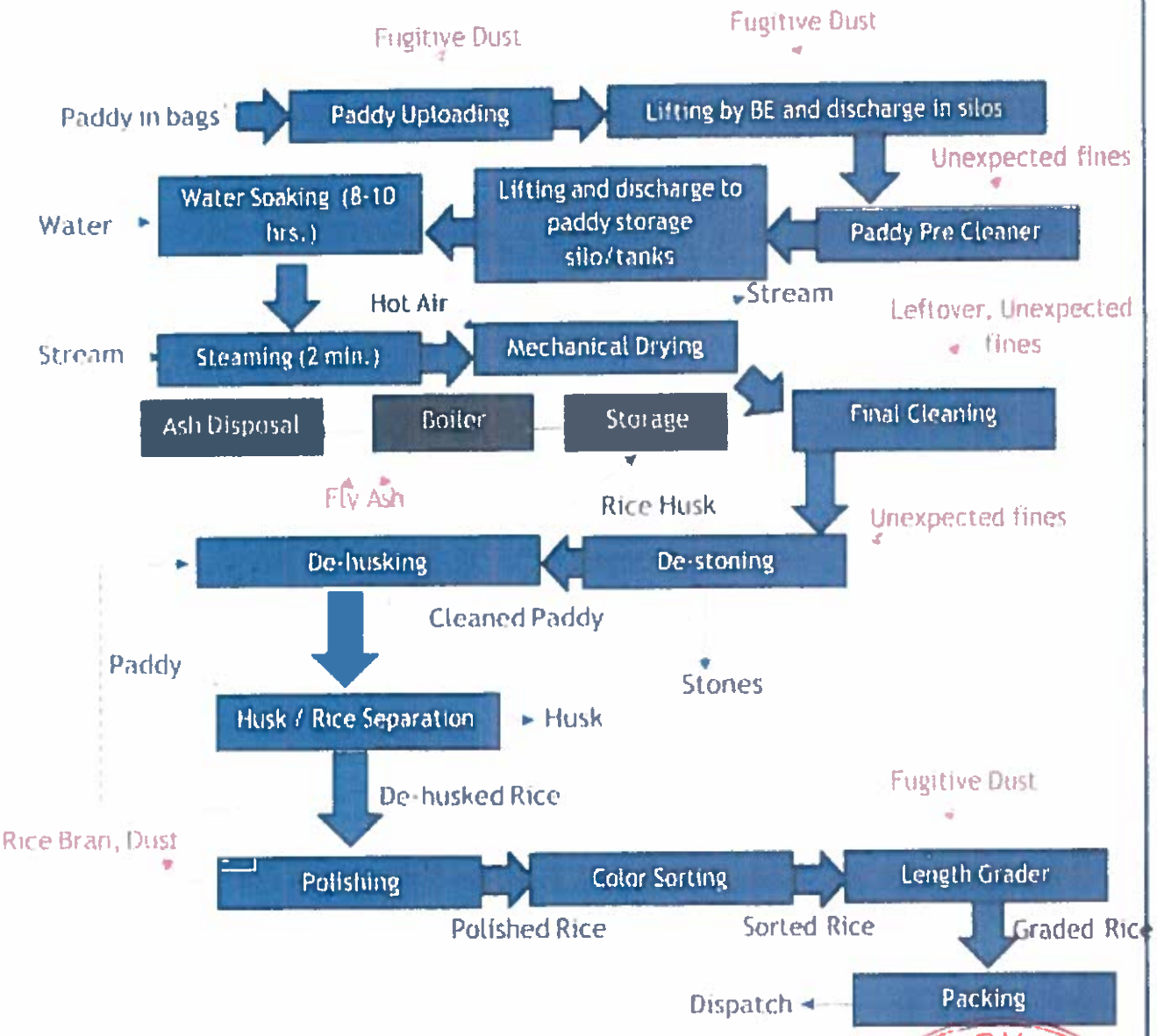


Image 5.15: Typical Sources of Fugitive emissions in Rice Mills

Environment Impact Study

On 1KM radius of a rice-mill M/s K. M. Agro Tech Private Limited

Table 5.1: Typical Sources of Fugitive emissions in Rice Mills

SL NO	SECTIONS	SOURCES OF FUGITIVE DUST EMISSIONS	TYPE OF FUGITIVE EMISSIONS
1.	UNLOADING SECTIONS	a) Paddy Unloading	Fugitive Dust
		b) Bucket Elevator	Fugitive Dust
		c) Transfer points • Belt to belt • Belt to elevator. • Elevator to silo	Fugitive Dust
		d) Paddy storage Bins	Fine Dust
		e) Locations of free fall of Paddy	Fine Dust
2. 2.	CLEANING SECTION	f) Pre- Cleaner machine	Unextracted Fines
		g) Vibratory screen	Fine Dust
		h) De-stoner	Unextracted fines
		i) Paddy cleaner	Fine Dust
3.	MILLING SECTION	j) Bucket Elevator	Fine Dust
		k) Hullers/ De-huskers	Rice husk fines generated
		l) Paddy Separator/ Aspirator	Fine Dust
		m) Polishers	Rice Bran Dust
		n) Grader	Fugitive Dust
4.	RICE HUSK HANDLING & STORAGE	o) Conveyers	Fine Dust, Rice Husk
		p) Rice Husk Storage Area	Fine Dust, Rice Husk
5.	BOILER SECTION	q) Leakages from ducts and flanges from boiler to stack	Fly ash
		r) Ash Conveyers	Fly Ash
6.	ASH STORAGE AND DISPOSAL SITE	s) Open Ash Storage	Fly Ash
		t) Ash loading and unloading	Fly Ash
		u) Unprotected Ash disposal site	Fly Ash

5.1.2. Water Pollutant discharge from Rice Mills

Rice mill wastewater (RME) can cause serious environmental pollution due to its high levels of organic and inorganic substances, including:

- Suspended and dissolved organic matter: This includes soak water from the parboil process, which can putrefy over time.
- Particulate impurities: These include finely divided organic and inorganic matter, as well as coloured compounds.
- Chemicals: These include pesticides, lignin, phenol, and pigment
- Sulphur-containing molecules: These cause the effluent to have an unpleasant odour

5.2. Environmental Pollution Prospect of Fly Ash based Brink Making Industry:

5.2.1. Fugitive Emission problem of Fly Ash:

Fugitive emissions are air pollutants that are not released from a point source, such as a stack. They can include dust from coal and ash stockpiles, entrainment of pollutants during material handling, and leaks from valves and flanges.

Fugitive emissions from fly ash are a significant air pollution issue, especially for source operators that handle granular materials like coal, fly ash, or limestone. Quantifying fugitive emissions is important for air permitting purposes, and can be done using published emission factors.

Some studies have investigated fugitive fly ash emission factors (EFs):

- One study found that the ratio of $PM_{2.5}$ to PM_{10} in fugitive fly ash plumes was 9%, which is similar to the 10% ratio in AP-42 formulations.
- Another study found that model outputs combined with ambient measurements yielded EFs of 96 g Mg(-1) for the PM(c) fraction and 18 g Mg(-1) for PM

5.2.2. Hydrological Leaching of Fly Ash:

Key potential hydrological impact is the collection of contaminants by water as it percolates through or over a material. The use of leachant tests are conducted to analyze the solubility of Fly Ash Studies shown that leachate is highly variable as a result of type of coal and plant process. It has been proved leachability of certain elements decreased as the material aged. The pH levels of Fly Ash encourages leaching of trace metals although it has been found that high pH levels favours leaching of arsenic.

It has been also reported that relative concentrations of elements leached in comparison with amount available from ash sluice water of various pH levels namely:

Alkaline: Se>B>Cr>Ni>Cu>Ba>As>Zn>Al

Neutral: B>Cd>As>Se>Zn>Ni>Mn>Cu>Ba

Acidic: B>Zn>Ca>F>Na>Mg,Co>Ni,Sr>Be>Cu,Ph,Al>Si,Fe,K

Arsenic is found in al pH levels of Fly Ash but is in the non-toxic form. The metals of concern to toxicity were evident but they are within the statutory limits although it has been stated that the results does not mean that Fly Ash does not have any toxic effects.

Number of studies has addressed the leaching of Fly Ash residue and what impact it has on the environment. Environmental changes as a result of pollution formed through energy production and use, affect soil pH, structure fertility and microbial communities. Soils become relative sterile to all but resistant microbial life forms. Microorganisms are able to degrade pollutants in soil leading to in-situ rehabilitation of pollutant soils. Fly Ash consists of fine, powdery particles that are spherical in shape and is mostly glashy (amorphous) in nature. Bituminous coal Fly Ash are silica, alumina, iron oxide and calcium with various amounts of carbon. Fly Ash is alkaline product of fossil fuel power generated stations. It has pH of approximately 11.5 when fresh and due to weathering, pH reduces and stabilizes to pH value of about 8.5.

Heavy metals in Fly Ash can exhibit a broad range of toxic effects to humans, terrestrial and aquatic life and plants (Ayanda, 2012). Most of the elements in Fly Ash occur as

silicates, oxides, sulphates and alumino-silicates. These elements cannot be broken down or destroyed in the environment, but they can change form (Ayanda, 2012). Fly Ash releases large quantities of heavy metals into the localized area and the heavy metals can also enter the aquatic environment and, therefore, lead to a steady background level in aquatic environment. Some of the Fly Ashes have been analyzed for detectable concentration of all toxic and potentially toxic elements. The elements included heavy metals such as Arsenic (As), Antimony (Sb), Cadmium (Cd), Chromium (Cr) and Lead (Pb) which are harmful to health in excessive amounts. In order to understand some of these elements, another comparison must be conducted to show the impact of these elements on the environment, if any. Fly Ash goes through to a long-term dissolution, the neutralization capacity of Fly Ash is extended, offering a liming potential that lasts longer and is less dramatic than agricultural liming. This slow transmission of pH change allows for adaptation of the microbial communities and plants within the polluted soils.

Table 5.2:X-Ray spectrometry tests report on typical Class F Fly Ash (Ash Resources, 2012):

Parameter	Ranges (Parts per billion)
As	20
Ba	1502
Br	< 2
Ce	235
Co	16
Cr	190
Cs	7.8
Cu	49
Ga	50
Ge	6.9
Hf	13
Pb	54
La	132
Mo	4.5
Nb	41
Nd	100

Ni	40
Pb	54
Rb	53
Sc	31
Sm	25
Sr	1474
Ta	4.8
Th	4.5
Ti	< 3
U	9.2
V	129
W	8.6
Y	82
Yb	6.8
Zn	49
Zr	476

Table 5.3: Maximum allowable inorganics accepted in drinking water (Bicki, 1993).

Material	Fly Ash Results (Parts per billion)	Maximum Acceptable Level (Parts per billion)	Possible effects of higher level
As	20	50	Lung Cancer, Kidney Damage
Ba	1502	1000	Hear Damage
Cr	190	50	Liver, Kidney Damage
Pb	54	50	Brain Damage
Se	2.8	10	Growth Inhibition
Cu	49	49	Metallic taste, blue-green strains on fixtures
Zn	49	N.A.	Metallic taste

Chapter -6

Required Environment Management Facilities at Site

6.1. Facilities required for the Rice Mill Plant:

6.1.1 Fugitive Emission Control System

In order to improve the work environment and control the fugitive emissions from various sections (i.e. Unloading, Pre-Cleaning, milling, Boiler etc.) most of the rice millshave employed various dust extraction cum control systems as discussed below. As thisis a small-scale rice mill following Fugitive dust extraction system are required for the rice milling units:

6.1.1.1. Unloading and Conveying Section

No such dust extraction systems are present in many small mills.

6.1.1.2. Paddy cleaning Section

Generally, employ an ID Fan for extraction of Dust from various equipment. Typically, several flexible pipe connections are taken from the main pipe entering the ID Fan. The extracted air is passed through a Cyclone, where coarse particles are collected, and the fines are discharged through a Stack placed above Cyclone.

6.1.1.3. Paddy cleaning Section

Most of the Small Mills have flexible Suction Ducts for extraction of Dust, Rice Husk fines and Rice Bran. For separation and collection of fines generally Cyclones are installed.

6.1.1.4. Boiler Section

Ash generated in Furnace is manually taken out in pits.

6.1.1.5. Ash Handling and Disposal Site

Many medium and large mills spray water in the boiler ash handling sections to suppress the fly ash. Ash is loaded and conveyed to open Landfills in wet form in order to control fugitive emissions and is also covered with a fine layer of soil at the disposal site for the same purpose.

6.1.2. Industrial Effluent Treatment System

The Environment (Protection) Act of India, 1986, requires every rice mill to have an Effluent Treatment Plant (ETP) that includes a biological treatment process. Rice mill effluent contains high levels of organic matter, phosphate, chemical oxygen demand (COD), and biological oxygen demand (BOD), which can pollute water and soil and be harmful to humans. Treating rice mill effluent is essential to make it suitable for discharge into surface water or on land.

Rice mill effluent treatment typically involves two stages:

- Preliminary or pretreatment

  Removes large solid materials that could damage or clog plant equipment, such as by-passing wastewater through bar screens.

- Primary treatment

  Removes about 60-70% of solid materials and 40% of BOD using physical or physicochemical processes.

Some other treatment models that have been successfully used include Coagulation/flocculation, Bioremediation, Treatment by bioreactor, Phytoremediation, and Chemical treatment.

Chapter -7

Potential Health Impact of Fly Ash Fugitive Emission

Fly ash poses significant health threats because of the toxic metal's presence, such as arsenic, mercury, chromium (including the highly toxic and carcinogenic chromium VI), lead, uranium, selenium, molybdenum, antimony, nickel, boron, cadmium, thallium, cobalt, copper, manganese, strontium, thorium, vanadium and others. Ironically, even the air pollution control measures like electrostatic precipitators and baghouse filters become more effective at trapping fly ash and decreasing the producers' air pollution, the waste being dumped into coal ash waste streams is becoming more toxic. Fly ash is best known for polluting our drinking water, lakes, rivers and streams, and the threat it poses when dumped into large earthen dams that can and do break, causing catastrophic spills and leaks. In February 2014, just days after the U.S. Environmental Protection Agency (EPA) announced a deadline for finalizing federal coal ash regulations, an underground pipe beneath a coal ash pond in North Carolina ruptured, sending 82,000 tons of coal ash into the Dan River. In December 2008, a massive coal ash pond at the Tennessee Valley Authority's Kingston Fossil Plant in Harriman, Tennessee, burst, sending more than 1 billion gallons of coal ash sludge across 300 acres, destroying and damaging 40 nearby homes and polluting miles of two nearby rivers. These are two examples of more than 200 documented instances of coal ash contaminating nearby waters across the country.

When disposed of, coal ash dust is emitted into the air by loading and unloading, transport and wind. Once in the air, it can migrate off-site as fugitive dust. As a result, workers and nearby residents could be exposed to significant amounts of coarse particulate matter (PM10) and fine particulate matter (PM2.5).

7.1. Exposure to small particle pollution:

Fly ash dust is small particles, the smaller the particle, the greater the health risks. The very smallest particles are inhaled into the deepest part of the lungs where they trigger inflammation and immunological reactions. Some particles gain access to the systemic circulation and travel to distance organs where they produce heart or lung disease, while others may enter the brain directly

via the nerves in the nose. The disease- causing potential of small particles, particularly those less than 2.5 micrometers in their aero- dynamic diameter (PM2.5), has led the EPA to include them among the six criteria pollutants under the Clean Air Act, which requires national air quality standards for certain pollutants that cause adverse health impacts, including PM2.5.7 As epidemiological research becomes more sophisticated due to improved techniques for monitoring air quality and advances in statistical and population sampling methods, it seems likely that there is no level at which PM2.5 is assuredly free from causing adverse health effects. This principle became clear in a study of 51 metropolitan areas published in the New England Journal of Medicine, the world's leading peer-reviewed medical journal. The investigators who wrote this paper retrieved PM2.5 and mortality data from the late 1970s and early 1980s and compared it to data obtained about two decades later. Uniformly, these analyses showed important increases in health benefits as the PM2.5 concentrations fell. For example, in the Buffalo, New York, metropolitan area, a reduction of 13 micrograms per cubic meter of air was associated with a three- to four-year increase in life expectancy. Many other studies published in leading peer-reviewed medical journals have shown similar results—higher particulate concentrations are associated with higher mortality rates. These studies link coal-derived particulates, including those from fly ash to the four leading causes of death in the U.S.: heart disease, cancer, respiratory diseases and stroke.

In addition, preliminary data may lead to adding Alzheimer's disease and Type II diabetes mellitus to this list. One study from the Women's Health Initiative is particularly instructive and important for several reasons. For one, it is big: more than 64,000 post-menopausal women participated. It was also done prospectively, i.e., at the time the women entered the study they were judged to be free from cardiovascular disease and were then followed for an average of about seven years. Thus, the occurrence of endpoints, including stroke, heart attack and the need for coronary artery bypass surgery, could be determined with great accuracy. The study showed that for a ten microgram per cubic meter increase in the concentration of PM2.5, there was a 24 percent increase in the incidence of the diseases.

Whereas initial studies examined long-term exposures to particulates, advances in statistical methods have made it possible to relate even brief increases in the concentration of PM2.5 to transient increases in the risk for stroke, fatal heart rhythms and out-of-hospital cardiac arrest. This is made possible because increasing numbers of patients with heart disease have implanted cardiac defibrillators that can detect a potentially fatal heart rhythm and deliver a strong shock to the heart to restore a lifesaving normal rhythm. The painful shock causes patients to go to the hospital emergency room, where technicians can "talk" to the defibrillator using radio signals and retrieve the exact heart rhythm and the time at which the device went off. Investigators then compare this time and rhythm data to additional data from air pollution monitoring sites near the patient in order to relate the two seemingly separate data sets, joined by a common time. Times and pollutant levels chosen when the device did not fire off serve as controls. Although burning coal is not the biggest source of PM2.5, improvements in analytical techniques have made it possible to point the finger at coal with increasing confidence. Initially it was only possible to measure and identify the source of relatively large particulates. Subsequent improvements then made it possible to segregate particles in terms of size. Recently, investigators have applied statistical techniques coupled with advances in analytical chemistry to clearly identify the source of particles. Those with large amounts of silicon dioxide, the principal com- ponent of sand, arise from the earth's crust; particles with lead come from motor vehicles; and particles marked with selenium result from burning coal. Source-specific analytical techniques then showed that the selenium-containing particles were the most damaging to health—that is, the particles that arose from coal.

While inhalation of coal ash fine particle pollution poses the greatest threat to human health from fugitive coal ash dust, the composition of the coal ash dust poses additional inhalation effects as well.

7.2. Harmful effects of silica exposure via inhalation of fly ash:8o07

The composition of fly ash dust can vary considerably depending on the coal that was burned, but all fly ash contains significant amounts of silica, in both crystalline and amorphous form.8 Respirable crystalline silica in fly ash can lodge in the lungs and cause silicosis, or scarring of the lung tissue, which can result in a disabling and sometimes fatal lung disease. Chronic silicosis can occur after many years of mild overexposure to silica. While the damage may at first go undetected, irreversible damage can occur to the lungs from chronic exposure.

Such exposure can result in fever, shortness of breath, loss of appetite and cyanosis (blue skin). In addition, the International Agency for Research on Cancer (IARC) has determined that silica causes lung cancer in humans, and the National Toxicology Program (NTP) and National Institute for Occupational Safety and Health (NIOSH) have also classified silica as a human carcinogen.

7.3. Harmful exposure to excessive radioactivity:

Fugitive fly ash dust also contains radioactive metals.9 While each coal seam will have different levels of radioactive metals attached to the carbon, all coals have at least some levels of naturally occurring radioactive materials, including uranium, thorium, potassium and their radioactive decay products including radium. Burning coal concentrates the radionuclides approximately three to ten times the levels found in the initial coal seams. The radioactive metals stay with the fly ash when the carbon is burned off. If these dusts are inhaled, they can transport radioactive metals into a person's lungs. The radioactive metals will undergo radioactive decay and the resulting water-soluble radium can be transported to a person's bones where it will replace calcium. It will also undergo further decay to radon gas, the second leading cause of lung cancer after tobacco smoke in the United States. Radon gas is generated from the decay of radium. Being heavier than air, it tends to lay in pockets in low-lying areas unless mixed with air and carried away by wind. In addition, the dust does not have to be inhaled to be dangerous. Dust can contaminate surface water supplies where the soluble radium can contaminate drinking water and be ingested by humans or other species.

7.4. Harmful exposure to mercury via fly ash:

Mercury is of particular concern due to its high toxicity and its accumulation in fly ash and eventually into the fly ash waste stream. Implementation of the federal Clean Air Mercury Rule will significantly increase the mercury content in fly ash because the mercury capture required by the rule will result in more mercury ending up in the solid waste created by coal burning. According to EPA testing of fly ash at plants that had mercury controls, the mercury in ash increased by a median factor of 8.5, and in one case, by a factor of 70.12 At the same time, other contaminants in fly ash such as arsenic and selenium also increased, concurrently elevating the risk to human health via inhalation of fugitive dust.

7.5. Harmful exposure to hydrogen sulfide via fly ash

Hydrogen sulfide is a flammable, colorless gas with the characteristic odor of rotten eggs. Hydrogen sulfide is released primarily as a gas and spreads in the air. Because of the high sulfur level in fly ash, hydrogen sulfide is often released at fly ash landfills and impoundments. Communities near dumps or coal plants and workers at these facilities may be exposed to hydrogen sulfide by breathing contaminated air. Exposure to low concentrations of hydrogen sulfide may cause nausea and irritation to the eyes, nose or throat.13 It may also cause difficulty in breathing for some asthmatics. Children are sometimes exposed to more hydrogen sulfide than adults because hydrogen sulfide is heavier than air and children are shorter than adults. The sulfurous stench from fly ash dumps can also significantly degrade the quality of life of com- munities near disposal sites.

Following image represents the summary of health effects caused by fugitive emission.

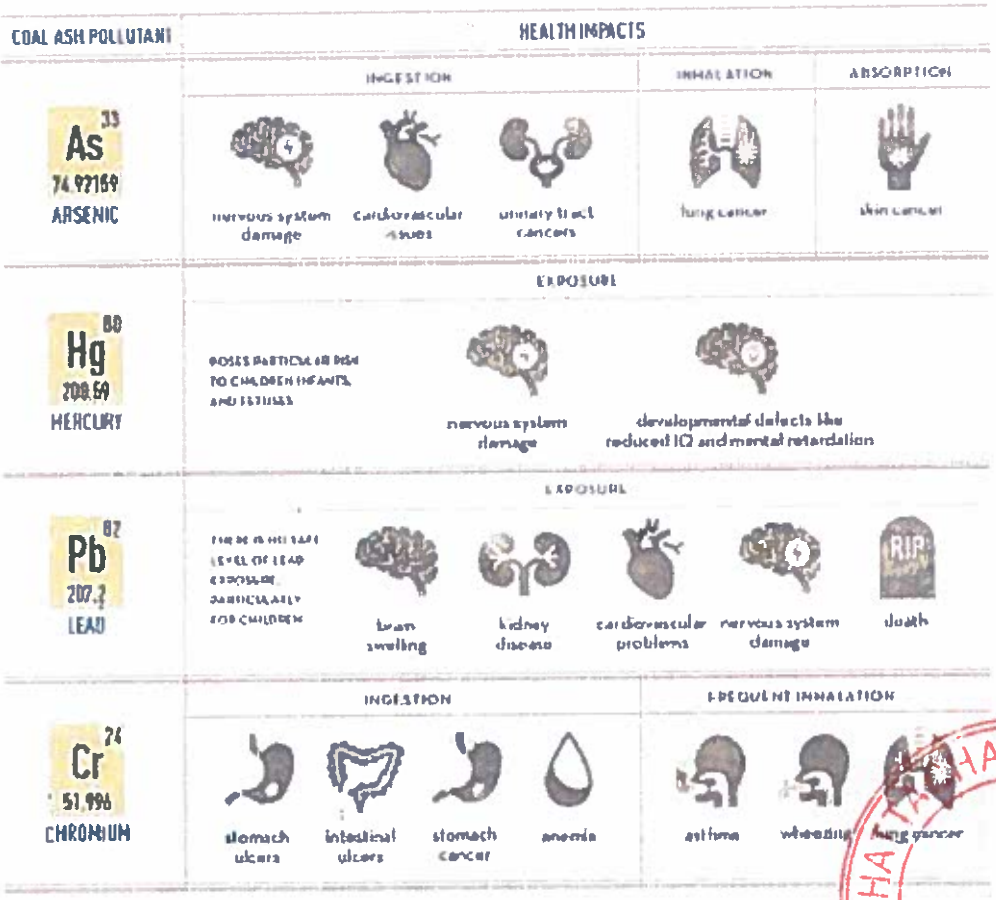


Table 7.1: Summary of Fly Ash Toxicity

7.6. Toxicity from Fly Ash Storage:

In 2009, the EPA documented the health threat from toxic dust near fly ash storage in its draft screening risk assessment, Inhalation of Fugitive Dust: A Screening Assessment of the Risks Posed by Coal Combustion Waste Landfills. The purpose of this screening assessment was to determine whether the National Ambient Air Quality Standards (NAAQS) could be violated

through dry handling of fly ash, and if so, what management options might be needed to reduce the health risk. Indeed, the EPA found that "there is not only a possibility, but a strong likelihood that dry-handling would lead to the NAAQS being exceeded absent fugitive dust controls. The EPA concluded that only daily controls daily cover) can definitively prevent unhealthy releases of particulates. However, a critique of the EPA's screening assessment found that it considerably under- estimated the risk to human health from toxic dust. The EPA considered only one source of fugitive dust emissions from fly ash—wind erosion—and failed to assess the substantial emissions that occur during unloading and grading of the ash, as well as from trucks traveling on the deposited waste at the landfill.22 In addition to toxic dust from fly ash, communities near waste disposal operations are exposed to carcinogenic diesel particulate emissions from trucks, on-site landfill equipment and diesel-powered pumps and generators. To compound the problem, high background levels of particulate matter from nearby equipment may increase the potential for fugitive dust from fly ash to cause significant human health problems. If the EPA had taken all of these factors into account, it would have found even greater risks to communities living near fly ash dumps.

Chapter -8

Environmental Assessment Planning and Execution

A comprehensive environmental assessment survey was planned to understand the local air and water environment and the field impact of the emission and discharge on the local micro-environment. Sample collection planning was configured based on following attributes:

1. The core zone (within 1 Km. radius) was considered for primary sample collection and analysis for the air and water environment.
2. Sampling sites were selected based on grid distribution of core zone and representative point identification.
3. Stratified sampling approach was undertaken.
4. Nature of surface water sample collected were composite.
5. High Volume Sampler was used for air quality assessment.

Based on above considerations following sites were selected:

Table 9.1: Coordinate of Sampling Sites

EIS FIELD	CO-ORDINATES
Ambient Testing Machine Installation Site	N23°28'25.5" E87°42'28.026"
Fly ash Sample Collection Site	N23°28'27.6708" E87°42'26.604" N23°28'25.6476" E87°42'29.916"
Home To Home Survey	N23°28'27.6708" E87°42'26.604" N23°28'25.6476" E87°42'29.916" N23° 28' 26.976" E87° 42' 29.9484"
Field Area Visit	N23°28'22.5732" E87°42'27.2268" N23°28'23.23" E87°42'23.17" N23°28'28.60" E87°42'21.82" N23°28'22.5732" E87°42'27.2268" N23°28'28.60" E87°42'21.82"
Soil Sample Collection Site	N23°28'29.07"N E87°42'23.30"E N23°28'29.97"N E87°42'23.30"E

8.1 Water Environment

8.1.1 Nature of Source:

To ascertain the baseline conditions of the Surface water quality samples of surface water were collected from 1 location within the project influence zone of 100 m radius. Water qualities were compared with CPCB freshwater classifications.

Table 8.2: Designated Best Use Standards for using water

Designated-Best-Use	Class of water	Criteria
Drinking Water Source without conventional treatment but after disinfection	A	Total Coliforms Organism MPN/100ml shall be 50 or less pH between 6.5 and 8.5 Dissolved Oxygen 6mg/l or more Biochemical Oxygen Demand 5 days 20°C 2mg/l or less
Outdoor bathing (Organized)	B	Total Coliforms Organism MPN/100ml shall be 500 or less; pH between 6.5 and 8.5 Dissolved Oxygen 5mg/l or more Biochemical Oxygen Demand 5 days 20°C 3mg/l or less
Drinking water source after conventional treatment and disinfection	C	Total Coliforms Organism MPN/100ml shall be 5000 or less; pH between 6 to 9; Dissolved Oxygen 4mg/l or more Biochemical Oxygen Demand 5 days 20°C 3mg/l or less
Propagation of Wildlife and Fisheries	D	pH between 6.5 to 8.5 Dissolved Oxygen 4mg/l or more Free Ammonia (as N) 1.2 mg/l or less

Irrigation, Industrial Cooling Controlled Waste disposal	E	pH between 6.0 to 8.5 Electrical Conductivity at 25°C micro mhos/cm Max.2250 Sodium absorption Ratio Max. 26 Boron Max. 2mg/l

A: " Drinking water surface without conventional treatment but after disinfection

B: " Outdoor bathing (organized)

C: " Drinking water source with conventional treatment followed by disinfection D: " Propagation of wild life, fisheries

E" Irrigation, industrial, cooling, controlled waste disposal

8.1.1.Objectives:

The objectives of the study are as follows: -

i. To find out the extent of the problem that the local residents are facing.

ii. To find out the monetary cost of the environmental damage caused by the rice mills of the region.

8.1.2.Surface Water sampling description

Table 8.3: Site of Surface Water Sampling Collection

Sample No.	Location	Distance from the Factory	Date & Time of Sampling	Coordinates
QLS/MR/W/24-25/86	Near K.M. Rice Mill, Village-Gopinathbati, P.O- Gonna Dwariapur, P.S – Ausgram, Pin-713128, Purba Bardhaman, West Bengal	0.06 K.M.	23.04.2024	23°28'29.16"N & 87°42'23.57"E

Some photographs of surface water sample collection from nearby water bodies are presented below:

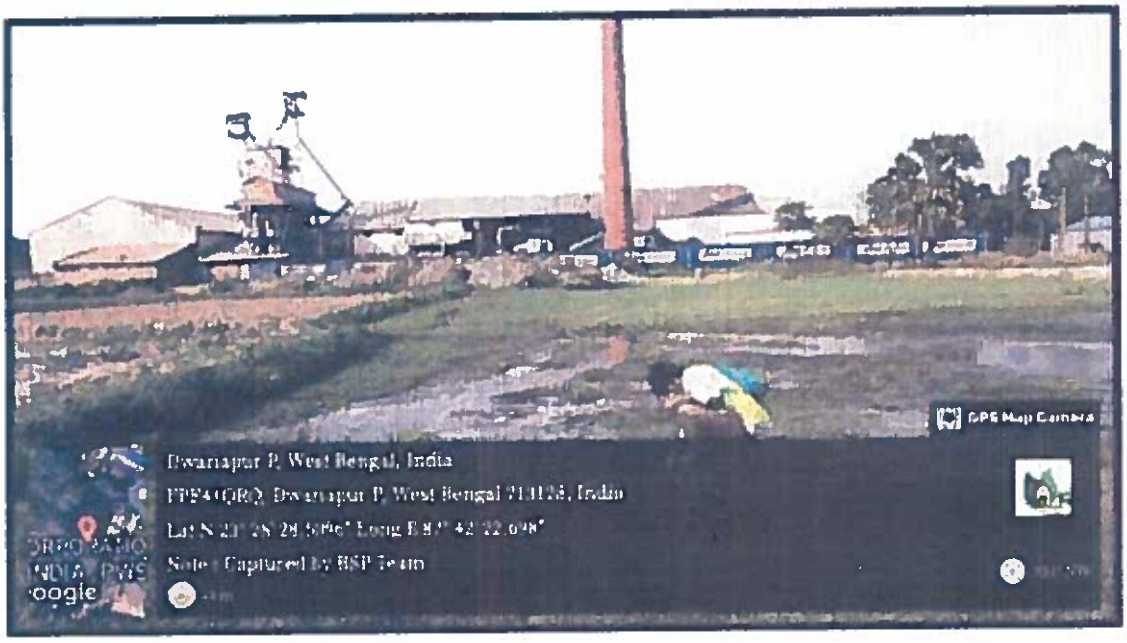


Image 8.1: Surface Water sampling

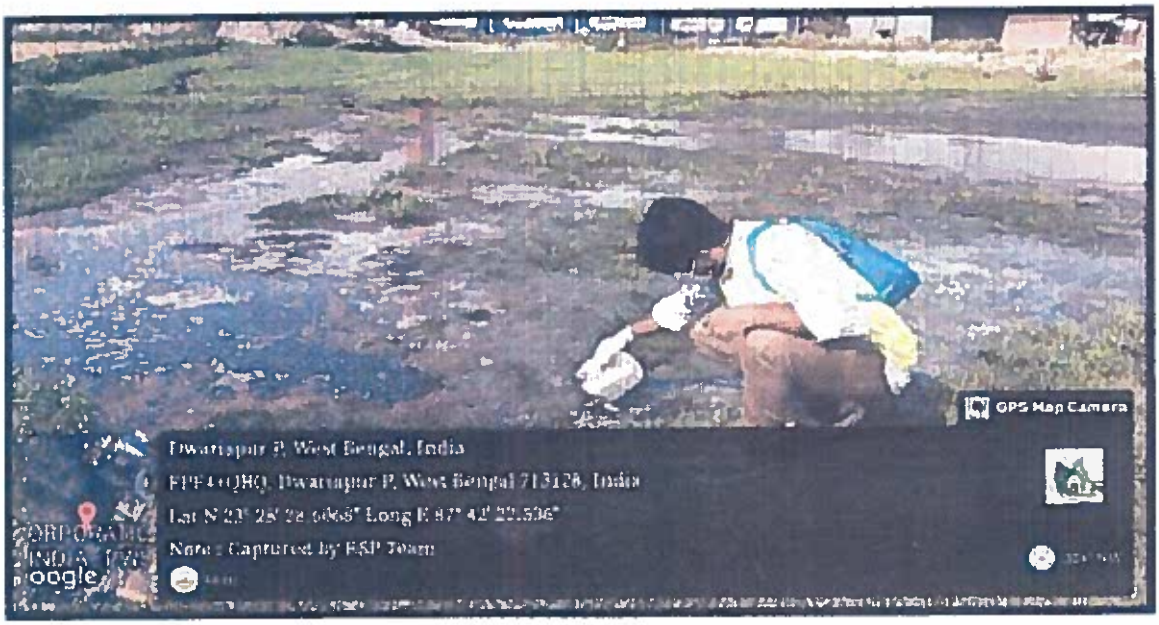


Image 8.2: Surface Water sampling

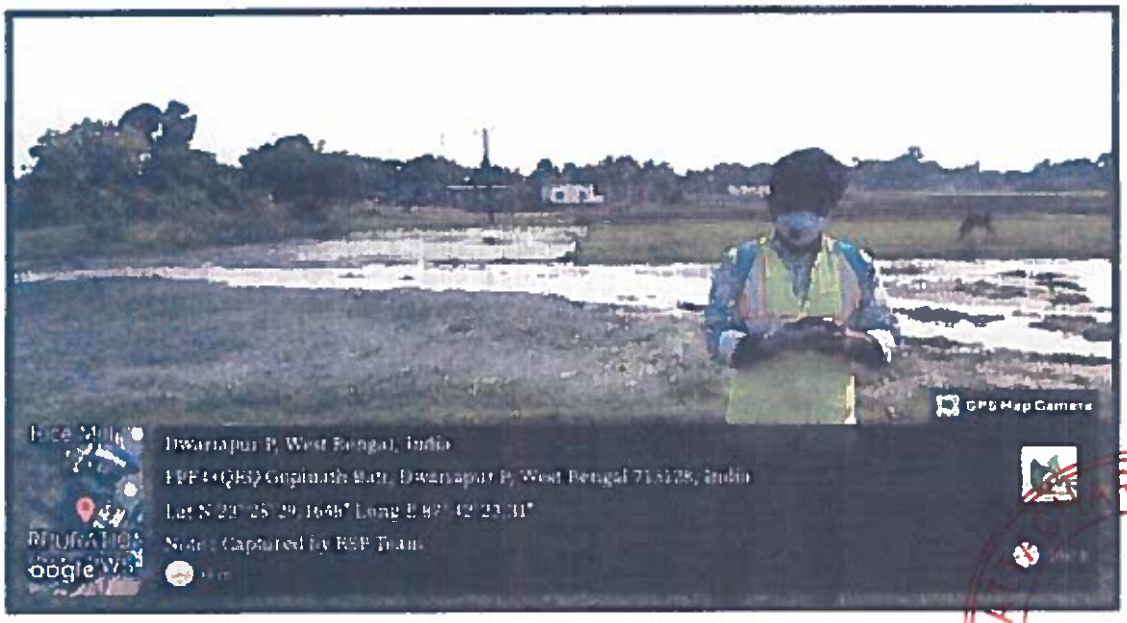


Image 8.3: Surface Water sampling

8.2 Air Environment

8.1.2 Nature of Source:

As Stack Sampling can't be undertaken under this study, we have considered ambient air quality monitoring study:

Table 8.4: National Ambient Air Quality Standards

S. No.	Pollutant	Time Weighted average	Concentration in Ambient Air		Methods of Measurement
			Industrial, Residential, Rural and Other Area	Ecologically sensitive area (notified by Central Govt.)	
(1)	(2)	(3)	(4)	(5)	(6)
1	Sulphur Dioxide (SO_2), µg/m³	Annual*	50	20	• Improved West and Geake • Ultraviolet fluorescence
		24 hours**	80	80	
2	Nitrogen Dioxide (NO_2), µg/m³	Annual*	40	30	• Modified Jacob & Hochheiser (Na- Arsenite) • Chemiluminescence
		24 hours**	80	80	
3	Particulate Matter (size less than 10 µm) or PM_{10} µg/m³	Annual*	60	60	• Gravimetric • TOEM • Beta attenuation
		24 hours**	100	100	
4	Particulate Matter (size less than 2.5 microns) or $PM_{2.5}$ µg/m³	Annual*	40	40	• Gravimetric • TOEM • Beta attenuation
		24 hours**	60	60	
5	Ozone (O_3) µg/m³	8 hours **	100	100	• UV photometric • Chemiluminescence • Chemical method
		1 hour **	180	180	
		Annual*	0.5	0.5	

6	Lead (Pb) µg/m³	24 hours**	1.0	1.0	• AAS / ICP method after sampling on EPM 2000 or equivalent filter paper • ED – XRF using Teflon filter

As fugitive emission is the predominant nature of the emission PM_{10} was considered for analysis.

8.2.2 Objectives:

The objectives of the study are as follows: -

iii. To find out the extent of the problem that the local residents are facing through fugitive emission.

iv. To find out the monetary cost of the environmental damage caused by the rice mills and fly ash-based brick know the region.

8.2.2 Air Sample Collection Points:

Table 8.5: Site of Ambient Air Quality Assessment

Sample No.	Report No.	Distance from the Factory	Date & Time of Sampling	Location
QLS/MR/A/24-25/122	QLS/MR/A/24-25/C/122	0.1 Km.	10-04-2024	Near K.M. Agrotech.Pvt.Ltd, Village-Gopinathbati, P.O-Gonna Dwariapur, P.S – Ausgram, Pin-713128, Purba Bardhaman, West Bengal. Lat & long: 23o28'23.8"N 87O42'28.026"E

8.2 Soil Environment

8.3.2 Nature of Parameter:

The soil environment baseline study covers collection of soil samples and determining relevant physical and chemical properties.

8.3.1 Objectives:

The objectives of the study are as follows: -

i. To find out the extent of the problem that the local residents are facing through fugitive emission.
ii. To find out the monetary cost of the environmental damage caused by the rice mills and fly ash-based brick making plant in the region.

8.3.2 Sampling Methodology

Soil sample collection was done making a pit about 15 inches deep and heaping the loose soil dug out. The loose soil is spread up in a circle and divided into 4 quadrants. The opposite quadrants are chosen and again the process is repeated till we get the required quantum of sample for analysis purpose. Collection of samples was done from One location as shown in the following Table:

8.3.3 Sampling Point of Soil Sample:

Table 8.6: Site of Soil Quality Assessment

Sample No.	Coordinates	Distance from the Factory	Date & Time of Sampling
QLS/MR/S/24-25/17	23°28'29.45"N & 87°42'21.32"E	0.1 K.M	10.04.2024

Chapter -9
Community Health Assessment Planning

Community health assessment study was conducted based on arranging community health camps. A health survey plan was configured to understand the health issues of the local vulnerable community to the environmental statutory non-compliance of the rice mill and the brick making unit functioning under same premises.

For Planning a health survey for a vulnerable community exposed to industrial pollution a comprehensive approach was considered to accurately assess the health impacts and identify needs for interventions. Here's a detailed plan to guide the process:

9.1. Define Objectives:

- Primary Objective: Assessing the health impacts of industrial pollution on the community.
- Secondary Objectives: Identifying the prevalence of specific health conditions, understand the community's perception of health risks, and determine the need for health interventions.

9.2. Community Engagement

- Stakeholder Meetings: Engage with community leaders, local health officials, and representatives of the industrial facilities.
- Focus Groups: Conduct focus groups with community members to gather qualitative data and understand their concerns and experiences.

9.3. Study Design

- Type of Study: Mix of cross-sectional, longitudinal, or case-control studies was undertaken.
- Sampling Method: Stratified random sampling was to ensure all subgroups within the community are represented.
- Sample Size: An appropriate sample size was calculated based on the population and expected prevalence of health issues.

9.4. Questionnaire Development

- Demographic Information: Demographic information like Age, gender, occupation, education, duration of residence.
- Health Status Observation: Study of Chronic conditions (e.g., asthma, cardiovascular diseases), acute symptoms (e.g., respiratory issues), mental health
- Environmental Exposure Assessment: Study of Proximity to industrial sites, types of pollutants, duration and frequency of exposure.
- Health Behaviors: Smoking, alcohol consumption, diet, physical activity.

Healthcare Access: Availability and utilization of healthcare services.

9.5. Pilot Testing

Conducting a pilot survey with a small subset of the community to refine the questionnaire and logistics.

9.6 Data Collection

- Training: Extending Training to surveyors on the questionnaire, ethical considerations, and cultural sensitivity.
- Survey Administration: Using a combination of face-to-face interviews and self-administered questionnaires, depending on literacy levels.

9.7 Data Management

- Data Entry: Use electronic devices for real-time data entry to reduce errors.
- Data Storage: Ensure data is stored securely, maintaining confidentiality.

9.8. Data Analysis

- Descriptive Statistics: Summarizing demographic and health status data.
- Inferential Statistics: Identifying associations between pollution exposure and health outcomes using regression models.
- Geospatial Analysis: Mapped health outcomes in relation to proximity to pollution sources.

9.9. Reporting and Dissemination

- Community Feedback: Presenting findings to the community in accessible formats, such as town hall meetings and pamphlets.
- Policy Recommendations: Providing recommendations to local authorities and stakeholders for mitigation measures and health interventions.

9.10. Ethical Considerations

- Informed Consent: Ensure all participants provide informed consent.
- Right to Withdraw: Inform participants of their right to withdraw from the study at any time.

Chapter -10
Environmental Sample Analysis Results

10.1. Surface Water Results

Table 11.1: Result of Surface Water Quality

Sl. No.	Parameter	TEST METHOD	Result	Limit as per CPCB for discharge of effluents	
				Inland Surface Water	Public Sewers
1.	pH at 25° C	APHA 24th Edition-2023, 4500 H+	6.48	5.5 to 9.0	5.5 to 9.0
2.	Total Suspended Solid in mg/l	APHA 24th Edition-2023, 2540 D	192	100	600
3.	Chemical Oxygen Demand (as COD) mg/l	APHA 24th Edition-2023, 5220B	400	250	---
4.	Biochemical Oxygen Demand (as BOD) mg/l	IS 3025 (Part 44)-1993, RA:2019	104	30	350
5.	Oil & Grease in mg/l	APHA 24th Edition-2023, 5520B	7.7	10	20

10.2. Ambient Air Quality Results

Table 11.2: Result of Ambient Air Quality

Location: Near K.M. Agro Tech.Pvt.Ltd. Village- Gopinath hati, P.O-Gonna Dwariapur, P.S – Ausgram. Pin-713128, Purba Bardhaman, West Bengal	GPS Coordinate: 23°28'25.5"N. 87°42'28.026" E
Sampling Done by: RSP Green Personals & Submitted to us on 23.04.2024	Sampling done as per: CPCB Guidelines (Volume-1)
Date of sampling: 10.04.2024	

Sl. No.	Pollutants	Result	Limit as per CPCB	Method of Test Reference
1	Particulate matter (<10µm) in µg/m^3	937.5	100	IS: 5182 (Part-23) -(RA-2017)
NOTE: Limit as per CPCB notification, New Delhi, 18th November 2009, for Ambient air quality.				

10.3. Soil Quality Results

Table 9..3: Result of Soil Quality

Sl. No.	Test Parameter	Test Method	Result
1.	pH at 25 °C	IS 2720 (Part 26): 1987(RA 2011)	6.22
2.	Electrical Conductivity, µS/cm at 25 °C	IS 14767 :2000, RA 2016	192
3.	Organic Carbon, %	Soil Analysis (Soil Science society for America) Part II	0.96
4.	Organic Matter, %	IS 2720(Part 22) 1972 RA 2015	1.66
5.	Water Holding capacity, %	SOP No. TPM/QLS/E/S/WHC based on Soil & Plant Analysis, C.S.Piper	49.2
6.	Bulk Density, gm/cm^3	IS 2720 (Part -29) 1975 RA 2005	1.32
7.	Texture	SOP No. TPM/QLS/E/S/MA Soil & Plant Analysis, C.S.Piper	Clay Loam
	a) Sand, %		44
	b) Silt, %		17
	c) Clay, %		39

Chapter -11
Discussion on Environmental Sample Result

11.1. Surface Water Environment

The parboiling, boiler blowdown, and paddy soaking procedures at the rice mill generate, on average, 100 kl of effluent per day. The physicochemical characteristics of the effluent indicated that its pH was alkaline (6.48) and that its COD content was high (400 mg/L). Because the total suspended solids (192 mg/L) and BOD (104 mg/L) were much higher than the guidelines established by ISI (1974) for the release of industrial effluent into inland surface waters and on land for irrigation, the industrial process' effluent had a high level of organic matter. Treatment is essentially required in order to make rice mill effluent suitable for dumping into surface water or onto land for irrigation.

11.2. Air Environment

The highest reported concentration of PM10 at the project site during monitoring was 937 µg/m3. Increased value noted at the project location as a result of the rice mill project operations. The 24-hour average PM10 standard level is 100µg/m3.The purpose of this study is to examine the structural features of nearby rice mills that result in dust particles during milling. Two observed factors—the size and quantity of dust particles—help identify the primary distinction between the two types of local ricemill structures: the wooden type and the iron type. A healthy indication of milling operators is assessed using the data gathered from on-site measurements. Field measurements are set up at each rice mill for a single area. Thirteen locals are observedand assessed for respiratory system function. On April 10, 2024, a single day is dedicated to measuring the site. from the data that was measured. Due to dailyinhalation of dust during the milling process, all 13 hamlet residents suffer from restrictive lung ailments.

11.3. Soil Environment

The effluents were high in various solids, COD, BOD, chlorides, sulphates, and had low dissolved oxygen and moderately alkaline pH. The effluents disturbed the pH, N, P, $CaCO_3$ and organic matter, the greatest perturbance being observed in the potassium of the soil when effluent was used for irrigation.

Chapter -12
Conclusions

The prevalence and frequency of diseases like eye problems, allergic attack (rush in hand, dust allergy) , respiratory problems clearly indicates that the fugitive dust generation of rice by- product and fly ash are resulting serious health concern for nearby community

A significant discrepancy in reading has been observed between the closer and further ambient air samples, with particulate matter availability being higher than the recommended limit. A "fly-ash brick manufacturing unit" could be found to be present, and handling fly-ash, which contains ultra-fine particles, is what makes a difference in this case. Since it's well known that residing in places with greater PM2.5 and PM10 concentrations can increase the chance of health risks, especially respiratory system-related ones

The results of the soil fertility and water tests make it abundantly evident that contamination may affect agricultural productivity and health. Ingesting the tainted crop may also pose a risk to human health.

Based on information from public hearings, it is known that a one-kilometer radius surrounding the facility has seen a significant increase in air, water, and soil pollution, which has resulted in a variety of ailments.

Therefore, the ground report clearly shows a serious environmental disturbance for which the fly-ash brick production facility is solely liable, regardless of the laws of the land or their applicability. The effluent discharge limits and ambient air quality standards in the nearby region frequently fall short of the Central Pollution Control Board's specified standards, meaning that both the Industrial Unit of K.M. Rice Mill and OM Sun Bricks have minimal environmental statutory compliance. There is no other industrial units on that locality indicating that the environmental degradation in the local microclimate is the sheer outcome caused by uncontrolled and environmentally unsafe manufacturing practices of these two industrial units.

Environment Impact Study

On 1KM radius of a rice-mill M/s K. M. Agro Tech Private Limited

The environmental impact on food industry like rice mill located near fly ash-based plants can be substantial and multifaceted. Fly ash, a byproduct of coal combustion, can affect air, water, and soil quality, which in turn impacts the rice mill as follows:

1. ***Air Pollution:***

Particulate Matter: Fly ash consists of fine particulate matter which is becoming airborne. These particles can settle on crops and food processing facilities, leading to contamination.

Toxic Emissions: Fly ash can release toxic substances like arsenic, mercury, and lead into the air. When these are deposited on crops, they can enter the food chain, posing a risk to human health.

Odor and Air Quality Degradation: The release of fly ash particles can contribute to a decline in local air quality, making it difficult for the rice mill to maintain a clean and safe production environment.

2. **Water Pollution:**

Leachate Contamination: If fly ash is improperly stored, rainwater can cause leaching of toxic elements into nearby water bodies. This contaminated water can then be used for irrigation, leading to polluted crops and contaminated rice production.

Aquatic Ecosystems: Water pollution from fly ash can harm aquatic ecosystems, impacting the availability of clean water for agricultural and industrial use.

Groundwater Contamination: Fly ash can seep into groundwater sources, which may be used by nearby rice mill. Contaminated groundwater can lead to the pollution of food products, posing health risks and legal challenges.

3. **Soil Contamination:**

Heavy Metals in Soil: The deposition of fly ash on soil can introduce heavy metals like cadmium, chromium, and selenium into the soil. These metals can be absorbed by plants, leading to contaminated crops.

Soil Fertility: The accumulation of toxic substances from fly ash can degrade soil quality, reducing its fertility and negatively affecting crop yields. This can lead to reduced productivity for food industries reliant on local agriculture.

Ecosystem Disruption: The introduction of fly ash into soil ecosystems can disrupt the natural balance of soil microorganisms, affecting soil health and the growth of crops.

4. **Impact on Biodiversity:**

Habitat Destruction: The disposal and storage of fly ash can lead to habitat destruction, affecting local flora and fauna. A decrease in biodiversity can have cascading effects on local ecosystems and agriculture.

Pollinator Decline: Air and soil contamination can harm pollinators like bees, which are essential for the production of many crops. A decline in pollinators can reduce crop yields and affect the food supply chain.

5. **Climate Change Contribution:**

Greenhouse Gas Emissions: Proximity to fly ash handling plants means that food industries are located in regions with potentially higher levels of carbon emissions, contributing to local climate change.

6. **Health and Safety Concerns:**

Occupational Health Risks: Workers in food industries near fly ash plants may be exposed to hazardous materials, leading to respiratory issues, skin problems, and other health conditions.

Product Contamination: Contamination of food products with toxic elements from fly ash can pose serious health risks to consumers, leading to potential recalls, legal issues, and damage to the brand's reputation.

The samples of surface water, ambient air and soil were mostly collected outside the premises of the Industrial Unit of K.M. Agro Tech.Pvt.Ltd and OM Sun Bricks which indicates the state of degradation in the nearby micro-environment. However, for a proper statutory investigation ofthe actual real time state of emission and discharge by these industrial unit functioning in a common premise a comprehensive environmental audit is needful. The scope the Environmental Audit should cover all the manufacturing unit operations and static & rotating equipment's.

ANNEXURE-I

(Lab Reports of Soil Samples of nearby area of the Rice-Mill):

Qualissure Laboratory Services

361, Prantick Pally,
45/361, Bose Pukur Road,
Kolkata - 700107
Email : qualissure@gmail.com
Mob. No. : 9831287086
9830093976

DOC NO : QLS/SAMP/08-E/00

TEST REPORT

Name & Address of the Customer: M/s. RSP Green Development and Laboratories Pvt. LTD 7F, Dinbandhu Mukherjee Lane, 3rd & 4th Floor, Shibpur, Howrah-711102	Report No	: QLS/MR/S/24-25/C/17
	Date	: 30.04.2024
	Sample No.	: QLS/MR/S/24-25/17
	Sample Description	: Soil
	Sampling Location	: Near K.M. Rice Mill, Village-Gopinathbati, P.O-Gonna Dwarlapur, P.S - Ausgram, Pin-713128, Purba Bardhaman, West Bengal
	Period Of Analysis	: 24.04.2024-29.04.2024
	Sample Submitted On	: 23.04.2024 By RSP Green Development and Laboratories Pvt. LTD
	Ref No. Date	: Verbal Confirmation

Analysis Result

Sl.No.	Test Parameter	Test Method	Result
1.	pH at 25 °C	IS 2720 (Part 26): 1987(RA 2011)	6.22
2.	Electrical Conductivity, µS/cm at 25 °C	IS 14767 :2000, RA 2016	192
3.	Organic Carbon, %	Soil Analysis (Soil Science society for America) Part II	0.96
4.	Organic Matter, %	IS 2720(Part 22) 1972 RA 2015	1.66
5.	Water Holding capacity, %	SOP No. TPM/QLS/E/S/WHC based on Soil & Plant Analysis, C.S.Piper	49.2
6.	Bulk Density, gm/cm³	IS 2720 (Part -29) 1975 RA 2005	1.32
7.	Texture	SOP No. TPM/QLS/E/S/MA Soil & Plant Analysis, C.S.Piper	Clay Loam
	a) Sand, %		44
	b) Silt, %		17
	c) Clay, %		39

Remarks: The details are provided from Customer on its own responsibility, Qualissure Laboratory Services does not Confirm about it and hence does not take any responsibility whatsoever.

Report Prepared By:

for Qualissure Laboratory Services
Reviewed & Authorized By

Bishnupriya Banerjee, Chemist
(Authorized Signatory)

------End of Report------

- *The results relate only to the item(s) tested.*
- *This Test Report shall not be reproduced without the permission of Qualissure Laboratory Services.*
- *The reserved part of sample(s), except perishable sample(s), shall be retained for 30 days from the date of issue of the Test Report.*

ANNEXURE-II

(Lab Report of Air Quality of nearby area of the Rice-Mill):

Qualissure Laboratory Services

361, Prantick Pally,
45/361, Bose Pukur Road,
Kolkata - 700107
Email - qualissure@gmail.com
Mob. No. : 9831287086
9830093976

DOC NO : QLS/SAMP/08-A/00

TEST REPORT

Name & Address Of the Customer :		
M/s. RSP Green Development and Laboratories Pvt. LTD 7F, Dinbandhu Mukherjee Lane, 3rd & 4th Floor, Shibpur, Howrah-711102	Report No.	: QLS/MR/A/24-25/C/122
	Date	: 29.04.2024
	Sample No.	: QLS/MR/A/24-25/122
	Sample Description	: Ambient Air
	Ref No. Date	: Verbal Confirmation

Analysis Result

Location : Near K.M. Rice Mill, Village-Gopinathbati, P.O-Gonna Dwarapur, P.S – Ausgram, Pin-713128, Purba Bardhaman, West Bengal			GPS Coordinate: 23°28'25.5"N, 87°42'28.026"E	
Sampling Done by: RSP Green Personnals & submitted to us on 23.04.2024			Sampling done as per : CPCB Guidelines (Volume-1)	
Date of sampling : 10.04.2024				
Sl. No.	**Pollutants**	**Result**	**Limit as per CPCB**	**Method of Test Reference**
1	Particulate matter (<10µm) in µg/m³	937.5	100	IS: 5182 (Part-23)-(RA-2017)
NOTE: Limit as per CPCB notification, New Delhi, 18th November 2009, for Ambient air quality.				
Remarks: The details are provided from Customer on its own responsibility, Qualissure Laboratory Services does not Confirm about it and hence does not take any responsibility whatsoever.				

Report Prepared By :

for Qualissure Laboratory Services
Reviewed & Authorized By

Benimadhab Goral, Chemist
(Authorized Signatory)

BHATTACHARYA ★ NOTARY, CALCUTTA ★

GREEN DEVELOPMENT AND LABORATORIES PVT. LTD. HOWRAH

End of Report

- *The results relate only to the item(s) tested.*
- *This Test Report shall not be reproduced without the permission of Qualissure Laboratory Services.*
- *The reserved part of sample(s), except perishable sample(s), shall be retained for 30 days from the date of issue of the Test Report.*

ANNEXURE- III

(Lab Report of Water Quality of nearby area of the Rice-Mill):

361, Prantick Pally,
45/361, Bose Pukur Road,
Kolkata - 700107
Email : qualissure@gmail.com
Mob. No. : 9831287086
9830093976

Qualissure Laboratory Services

DOC NO : QLS/SAMP/08-D/00

TEST REPORT

Name & Address Of the Customer : M/s. RSP Green Development and Laboratories Pvt. LTD 7F, Dinbandhu Mukherjee Lane, 3rd & 4th Floor, Shibpur, Howrah-711102	Report No.	: QLS/MR/W/24-25/C/86
	Date	: 30.04.2024
	Sample No.	: QLS/MR/W/24-25/86
	Sample Description	: Surface Water
	Sampling Location	: Near K.M. Rice Mill, Village- Gopinathbati, P.O- Gonna Dwarapur, P.S – Ausgram, Pin-713128, Purba Bardhaman, West Bengal
	Date of Performance	: 24.04.2024-29.04.2024
	Sample Submitted On	: 23.04.2024 By RSP Green Development and Laboratories Pvt. LTD
	Ref No. Date	: Verbal Confirmation

Analysis Result

Sl. No.	Parameter	TEST METHOD	Result	Limit as per CPCB for discharge of effluents	
				Inland Surface Water	Public Sewers
1.	pH at 25° C	APHA 24th Edition-2023, 4500 H+	6.48	5.5 to 9.0	5.5 to 9.0
2.	Total Suspended Solid in mg/l	APHA 24th Edition-2023, 2540 D	192	100	600
3.	Chemical Oxygen Demand (as COD) mg/l	APHA 24th Edition-2023, 5220B	400	250	---
4.	Biochemical Oxygen Demand (as BOD) mg/l	IS 3025 (Part 44)-1993, RA:2019	104	30	350
5.	Oil & Grease in mg/l	APHA 24th Edition-2023, 5520B	7.7	10	20

Remarks: The details are provided from Customer on its own responsibility, Qualissure Laboratory Services does not Confirm about it and hence does not take any responsibility whatsoever.

Report Prepared By:

for Qualissure Laboratory Services
Reviewed & Authorized By

Vishnupriya Banerjee, Chemist
(Authorized Signatory)

BHATTACHARYA S. NOTARY, CALCUTTA

——End of Report——

- *The results relate only to the item(s) tested.*
- *This Test Report shall not be reproduced without the permission of Qualissure Laboratory Services.*
- *The reserved part of sample(s), except perishable sample(s), shall be retained for 30 days from the date of issue of the Test Report.*

Buddhadev Ankure
Signature

VAKALATNAMA

In the NATIONAL GREEN TRIBUNAL, EASTERN ZONE

~~Suit~~ Case No. OA NO. 107 of 2023

SOUMEN CHAKRABORTY — Plaintiff / Applicant / Appellant

-Versus-

THE PRINCIPAL SECRETARY, ENVIRONMENT DEPARTMENT, GOVERMENT OF WEST BENGAL & ORS — Defendant / Opp. Party / Respondent

KNOW ALL MEN by these that I/We

BUDDHADEB ANKURE

do hereby in my/our name and my/our behalf constitute and appoint Sri

Supratim Bhattacharjee, Advocate

true and lawfull pleader/Advocate & attorney to appear and act for me/us in the matter noted above to file suit written statement conduct suit appeal from original suit order etc. and for that purpose to do all acts and thinks, whatsoever in that connection including compromise of the above matter depositing in or withdrawing money from filling or taking our of appear, document and payment order from Court referring matter in dispute between the partiers here to arbitration released from attachment filling execution or miscellaneous cases and other petitions belding at execution sale, obtaining payment from us out of court withdrawing custody and other fees and doing on my/our behalf such other acts in the above matters as are necessary and proper

I/We hereby agreeing to ratify and confirm all acts so done by the said Advocate or attorneys as my/our own acts and as if done by my/us to all intents and purposes.

Date.

ADVOCATE

Supratim Bhattacharjee
Advocate
High Court at Calcutta
6, Old Post Office Street
Room NO - 72, 2nd Floor
Kolkata - 700001
M - 8617252806
WB - 1858/2010
E-mail - bhattacharjeesupratim@gmail.com

Vakalatnama received from my client
is accepted and being satisfied.

Advocate

BEFORE THE NATIONAL GREEN TRIBUNAL EASTERN ZONE BENCH
ORIGINAL APPLICATION NO.107 OF 2023/EZ
INTERIM APPLICATION NO. OF 2024/EZ

In the matter of:

Soumen Chakraborty
... Original Applicant

-Versus-

The Principal Secretary, Environment Department, Government of West Bengal &Ors.
...Respondents

APPLICATION

SUPRATIM BHATTACHARJEE

Advocate
High Court at Calcutta
6, OLD POST OFFICE STREET,
ROOM NO. 72, 2ND FLOOR,
KOLKATA – 700001
(TEMPLE CHAMBERS)
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bhattacharjeesupratim@gmail.com
Enrollment no.:WB/1858/2010

Gmail

Supratim Bhattacharjee <bhattacharjeesupratim@gmail.com>

Interim Application in the matter of Original Application No. 107/2023/EZ

Supratim Bhattacharjee <bhattacharjeesupratim@gmail.com> Mon, Sep 9, 2024 at 9:11 PM
To: haque.samiul.SH@gmail.com, Dipanjan Ghosh <dpnjnghsh0@gmail.com>, Sudip Kumar Dutta <adv.skdutta@gmail.com>, ASHOK PRASAD <ashokadvhc@gmail.com>, "md.karim Warsi" <ms786karimwarsi@gmail.com>

Dear Sir/Sir's,
Enclosing herewith the Interim Application filed today before the Hon'ble National Green Tribunal, Eastern Zone Bench, Kolkata for your perusal.
Regards,
Supratim Bhattacharjee
Advocate

[Quoted text hidden]

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