RASHMI GROUP
A House of Infrastructure Solutions

RASHMI METALIKS LIMITED

REGD. & CORPORATE OFFICE : PREMLATA BUILDING, 39, SHAKESPEARE SARANI
6TH FLOOR, KOLKATA - 700 017, INDIA. TEL. : (033) 22894255/56, FAX : 2289-4254
Website : www.rashmigroup.com ● CIN No. - U27109WB2004PLC097737

O/C

Ref. RML/Pellet/ENV COMPL / June _2017

Date: 17.05.2017

WEST BENGAL POLLUTION CONTROL BOARD
RECEIVED
17 MAY 2017
UNCHECKED
Salt Lake, Kol-700 098

To,

Ministry of Environment and Forests
Eastern Regional Office,
A/3 Chandra Sekhar Pur,
Bhubaneswar – 751023
State: Odisha

Sub. **Six Monthly (June- 2017) Compliance Report** for Period October 2016 to March 2017 for Regularization of 0.9 MTPA Operational Pellet Plant by **M/s Rashmi Metaliks Limited,** at Village-Gokulpur, P.O.-Shyamraipur, District-Paschim Midnapore (W.B.)

Ref: -

1. **EC: Ministry's letter No. J-11011/372/2014-I(A) dated : 06.12.2016**

Dear Sir,

With reference to the above, we are hereby submitting the six monthly compliance reports for period from October 2016 to March 2017 of EC No- **J-11011/372/2014-I(A) dated : 06.12.2016** for Regularization of 0.9 MTPA Operational Pellet Plant at - Village-Gokulpur, P.O.-Shyamraipur, District-Paschim Midnapore, (W.B.), in the name of **M/s Rashmi Metaliks Limited** in Hard Copy.

As per Environment Clearance, Special as well as General Condition wise status report along with monitoring data for the environmental parameters is enclosed for your kind perusal.

We assured that we will comply all the conditions laid down in the consent letter and also abide to follow all the Rules & Regulations.

Hope you will find the same in order.

Thanking you.

Yours Faithfully,

For, **M/s Rashmi Metaliks Limited**

Authorized Signatory

C.C:-

1. **The Member Secretary**
   West Bengal Pollution Control Board, Parivesh Bhawan,
   10A Block – LA, Sector – III, Kolkata – 700 91

2. **The Regional Director**
   Central Pollution Control Board, (Eastern Zonal Office)
   'Southend Conclave', #502, 5th Floor
   1582, Rajdanga Main Road
   Kolkata- 700 107, West Bengal

Enclosures:-

1. Compliance Report for EC; Dated 12.06.2008
2. Copy of Latest Monitoring Report as Annexure-I
3. Copy of AAQM Report as Annexure-II,
4. Copy of Fugitive Emission Report as Annexure-III
5. Ground water sampling Report is enclosed as Annexure-VI
6. Disaster Management plan as Annexure-V

Southend Conclave
17/5/17

7. Green Belt development initiatives as Annexure-VI.
8. CSR photograph as Annexure-VII
9. ESR Break up Detail as Annexure –VIII.
10. Effluent & Leachate water sampling Report is enclosed as Annexure-IX
11. Copy of Ambient Noise Quality Monitoring Report Annexure-X.
12. EMP Detail as Annexure-XI
13. Copy of newspaper advertisement as Annexure-XII.

SIX MONTHLY COMPLIANCE REPORT

FOR

M/s RASHMI METALIKS LIMITED

Project Name- Regularization of 0.9 MTPA Operational Pellet Plant

EC NO- J-11011/372/2014-I (A) dated: 06.12.2016

Location: - Village-Gokulpur, P.O-Shyamraipur, District-Paschim Midnapore (W.B.)

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M/S RASHMI METALIKS LIMITED

HALF YEARLY ENVIRONMENTAL COMPLIANCE STATUS REPORT- June 2017

Period- October 2016 to March 2017

Project Name- Regularization of 0.9 MTPA Operational Pellet plant

Location: - Village- Gokulpur; Shyamraipur; District- Paschim Medinipur (W.B.)

(Reference: EC No-J -11011/372/2014-IA II (I); Dated 06.12.2016)

Sl No	Special Condition	Status
1	The project proponent shall install 24 x 7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office.	Agreed CEMS is already installed in the stack and data is being recorded.
2	Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm^3 and installing energy efficient technology.	• Adequate Measures have been taken for reducing the RSPM levels in the ambient air like 1. Fixed water sprinklers are provided in the potential internal roads, plant area and raw materials handling areas. 2. Three numbers of Mobile water sprinklers tankers have been engaged for regular water sprinkling in the haul roads of construction areas for control of fugitive dust emission. Management complies with all the conditions issued by Central & state Government Authorities. Regular reports of Monitoring and compliance are submitted to Ministry at regional office, Bhubaneswar regularly We have already installed online Stack Monitoring devices (i.e. Opacity Meter) in our most of the major stacks and remaining will be installed shortly. • Ambient Air Quality monitoring Analysis reports (where mentioning PM_{10}, $PM_{2.5}$, SO_x and NO_x level) are attached in as **Annexure No. – I** for your ready reference. Latest stack monitoring results which was done by WBPCB-Haldia regional office are attached in Analysis report **Annexure – II** for your ready reference.
3	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.	• Management is strictly maintaining the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 • Ambient Air Quality Monitoring (AAQM) is

		carried out on a regular basis and trend analysis is also prepared for the result comparison.
4	Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines/Code of Practice issued by the CPCB shall be followed.	• Fugitive / work zone monitoring is carried out on regular basis by W.B.P.C.B authorized laboratories. Fugitive reports are attached in Analysis report **Annexure – III** for your ready reference.
5	The project proponent shall install scrubber or upgrade the existing scrubbers within one year to reduce So_x emission, which will be verified by the Regional Office of the Ministry.	Noted
6	Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.	• Mobile water tankers are engaged for regular water sprinkling on haul roads for control the fugitive emission • Adequate dust extraction and dust suppression system such as Bag Filters, Dry Fogs system and mist water sprinklers have been installed at raw materials handling area to control the Fugitive Emission during the loading and unloading time. • Therefore, Ash, Raw Materials, finished products are transported by covered dumpers / vehicles or covered by tarpaulins to controlling the fugitive / ground level pollution.
7	A statement on carbon budgeting including the quantum of equivalent CO_2 being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed green belt and the quantum of equivalent CO_2 that will be emitted due to the proposed expansion shall be prepared by the project proponent annually and submitted to the Ministry and its Regional Office. The first such budget shall be prepared within a period of 6 months and subsequently it should be prepared every year.	We will provide the same as per our approved scheme from MoEF.
8	For the employees working in high temperature zones falling in the plant operation areas, the total shift duration would be 4 hrs or less per day where the temperature is more than 50^0C. Moreover, the jobs of these employees will be altered in such a way that no employee is subjected to working in high temperature area for more than 1 hr continuously. Such employees would be invariably provided with proper protective equipments, garments and gears	Being Complied With

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	such as head gear, clothing, gloves, eye protection etc. There should also be an arrangements for sufficient drinking water at site to prevent dehydration etc.	
9	The internal roads should be designed such that the fire tenders should reach upto 10 meters of any unit.	Noted
10	'Zero' effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.	• Our plant has been designed on 'Zero' waste disposal concept and it will ensured by top management on regular basis. • Various type of waste is coming out from the different process and it is re-used in other process after necessary treatment. • Our management has taken up eco- friendly (i.e. 3 R's , Reduce , Recycle & Reuse) philosophy for day to day plant operations , in this connection our management team trying to reduce the unit wise water consumptions and reuse the water after treatment in the same or other unit.
11	Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986 whichever are more stringent.	• We are monitoring the surface water and ground water sources inside the plant premises and outside villages by external agency approved by WBPCB on regular basis. • Ground Water Monitoring reports are attached in **Annexure - IV** for your ready reference.
12	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition. End use of solid/hazardous waste shall be submitted to the Ministry's Regional Office, State Pollution Control Board(SPCB) and central Pollution Control Board (CPCB).	• Waste Management procedure is in place to ensure that the waste / materials are managed in an responsible manner this includes are 1. Identify and classify waste 2. Color coding and labeling of waste collection bins / containers 3. Segregated at the source of generation 4. Inventory maintained 5. Proper Transportation 6. Adequate storage 7. Effective Treatment and Disposal 8. Documentation and reporting 9. Compliance to the statutory requirements Used oil is sold to the MOEF / CPCB authorized recyclers.

13	A time bound action plan shall be submitted for reduction in solid waste, its proper utilization and disposal.	• Our plant design is based on 'Zero 'waste disposal concept and it will ensured by top management. • All type of waste coming out from the different process will be re-used in other process after necessary treatment or changes. • For examples : ➢ **Dust From ESP & Bag Filter-** Used in the Process ➢ **Iron Ore Tailing-** Used in Sinter Plant of Rashmi Metaliks Limited & Reclamation of low land Tailing filling for abandoned Murom khadan filling. • Our management has taken up eco- friendly (i.e. 3 R's , Reduce , Recycle & Reuse) philosophy for day to day plant operations , in this connection our management team trying to reduce the unit wise water consumptions and reuse the water after treatment in the same or other unit. No solid waste is generated from the Pellet Plant process. Dust from ESP and Bag Filters are 100% recycled in process.
14	Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office at Chennai.	There is no generation of Fly Ash from the proposed unit.
15	A Risk and Disaster Management Plan shall be prepared and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of environment clearance letter.	Disaster management plan and Emergency preparedness plan are in place based upon the national and international guidelines. The copy of the same is here by furnished as **Annexure-V.**
16	Green belt shall be developed in 50 acres of land of existing integrated steel plant by planting native and broad leaved species in consultation with local DFO and local communities as per the CPCB guidelines.	Noted. Plantation is going on. In these connection necessary initiatives has already been taken from the management. Recent Green Belt Development Picture is enclosed as **Annexure-VI.** We are very much hopeful that a very good green belt shall be developed in and around the factory for preventive the Air pollution, Soil conservation etc.
17	At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and	Agreed Phase wise community development program has already been started. Copy of Recent photograph

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	item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of Village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's regional Office. An amount of at least Rs. 4.25 crores will be set aside by the Project Proponent with a detailed plan for the ESC activities to be carried out in next 4 years.	enclosed as **Annexure-VII.**
18	The proponent shall prepare a detailed CSR Plan for every year for the next 5 years for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall also be uploaded on the company. The plan so prepared shall be based on SMART (Specific, Measurable, Achievable, relevant and Time bound) concept. The expenditure should be aimed at sustainable development and direct free distribution and temporary relief should not be included.	Agreed The detail ESR Cost Break up is already submitted to MoEF, New Delhi. Again I am here by enclosing the same as **Annexure-VIII**
19	The Company shall submit within three months their policy towards Corporate Environment responsibility which shall inter-alia address (i) Standard operating process/procedure to being into focus any infringement/deviation/violation of environmental forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non-	Standard Operating practice towards Environmental sustainability designed and documentation work is under progress

	compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.	
20	The project proponent shall provide for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.	Agreed
21	The project proponent shall provide for LED lights in their offices and residential areas.	Noted
22	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The jousting may be in the form of temporary structures to be removed after the completion of the project.	The project is in operational phase and we are providing staff quarter with drinking water, electricity and sanitation facilities.

Sl No	General Condition	Status
1	The project authorities must strictly adhere to the stipulations made by the West Bengal Pollution Control Board and the State Government.	Adequate measure has been taken for pollution control and we are compiling with all condition issues by Central Pollution Control Board and State Pollution Control Board. Reports of Monitoring and compliance are submitted to Ministry, at regional office, Bhubaneswar on regular basis.
2	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEFCC).	Assured to comply
3	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM_{10}, $PM_{2.5}$, SO_2 and NOx are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office, CPCB and SPCB once in six months.	• Ambient air quality monitoring is carried out on quarterly basis for the relevant parameters as specified in the environment clearance i.e. PM10, PM2.5, SO_2, and NOx. The reports are regularly being submitted to MOEF and WBPCB. • Permanent AAQM stations are setup for in house monitoring.
4	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended form time to time. The treated wastewater shall be utilized for plantation purpose.	• All types of the waste water are treated and thereafter being re-used in cooling, dust suppression, Green Belt Development and no waste water is discharged outside the project boundary. The detail about the Effluent & Leachate sampling Report is enclosed as **Annexure-IX.**
5	The overall noise levels in and around the plant area shall be kept well within the	Ambient & Work Zone Noise monitoring Analysis (inside the plant in different units) reports are attached

	standards (85 dBA)by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime)	as **Annexure – X** for your ready reference.
6	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Occupational health surveillance of the workers is periodically accessed and records are being maintained as per the Factories Act 1948.
7	The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Yes, we have total 1, 00,000 KL (approx.) rain water harvesting ponds in our plant premises and harvested water are being used in our daily process as well as housekeeping purpose. Also we are recycling the water and after that reusing the water for industrial cooling or other purpose. And our expertise technical team always tries to find out the possibility for optimum use of the ground water by adopting the Reduce – Recycling – Reuse techniques (3 R's) within our existing facilities.
8	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	The environmental protection measures and safeguards recommended in the EIA / EMP report are adequately followed at the various stages of the project requirement
9	Requisite funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change (MoEFCC) as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Orissa. The funds so provided shall not be diverted for any other purpose.	Adequate funds have been deployed in CAPEX and OPEX and an itemised action plan has been drawn for implementing the stipulated conditions. An audit and review program is also in place to verify the implementation status and progress. The detail EMP Cost Break up is already submitted to MoEF, New Delhi. Again I am here by enclosing the same as **Annexure-XI.**
10	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the local NGO, if any, from who, suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web	• Already Being Complied

	site of the company by the proponent.	
11	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional office of the MOEFCC at Orissa. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Complied in regular basis
12	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEFCC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Orissa/CPCB/SPCB shall monitor the stipulated conditions.	• Being Complied with. Six monthly compliance reports are being submitted in regular basis. This report is being submitted as compliance to this point
13	The environmental statement for each financial year ending 31th March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MOEFCC at Orissa by e-mail.	• The Environmental Statement for the financial year 2015-2016 is submitted to WBPCB, vide letter ref. no. **03 / RML/ENV _Statement / 2015-2016.** **For the financial year 2017-2018 the** Environmental Statement to WBPCB will be submitted as per E (P) A Act.
14	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEFCC) at http:/envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the	In compliance to this point RML had already published Regularization of EC for 0.9 MTPA operational Pellet Plant in following newspapers- 1. Aajkal-18.12.2016 2. Business Standard-17.12.2016 The same is already been informed to your good office. Copy is here by enclosed as **Annexure-XII.**

	region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Orissa.	
15	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	• Noted Private Company , no finance is needed from outside

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Annexure-I

Stack ... WE ... From-2...

WEST BENGAL POLLUTION CONTROL BOARD

HALDIA REGIONAL LABORATORY

Block 5, 40 flats complex, Priyambada Housing Estate, P.O.-Khanjanchak, Durgachak, Haldia, Dist-Midnapore (E), Pin-721 602, Phone: (03224)- 276847

Analysis Report of Gaseous Emission

Analysis Done at Haldia Regional Laboratory :

1. Name of Industry		M/s Rashmi Metaliks Limited	
2. Address		Vill- Gokulpur, P.O.- Shyamraipur, P.S.- KGP (I), Paschim Medinipur-721304	
3. Category & Type		Red	
4. Sampling Date		22/08/2016	
5. Duration of Sampling		34 min	
6. Name of Laboratory		M/s. Indicative Consultant India	
7. Height of Stack from ground (m)		50.0	
8. Cross section of Stack at sampling point(m^2)		7.071	
9. Stack connected to		Pellet Pre Heater Discharge No. 1	
10. Emission due to(Furnace /Boiler)		Combustion of Coal & Producer Gas	
11. Average operational hours of boiler/ furnace (per month)		720 Hrs.	
12. APC System(if any)		E.S.P.	
13. Working load of source (MT/hr)		1600 TPD	
14. Fuel used		Coal & Producer Gas	
15. Rated Fuel consumption (Kg or l/hr)		-	
16. Working Fuel consumption (Kg or l/hr)		Producer Gas- 800 Nm³/hr, Coal- 43.3 MT/day	
17. Nature of Furnace /Boiler		-	
18. Flue gas Temp. (°C)		162.0	
19. Flue gas velocity	10.39 m/sec.	20. Volume of Flue gas drawn in lit (m^3)	1.02
21. Corrected flue gas volume(Nm3)	0.9376	22. Percentage CO_2	9.8%
23. To be compensated at (%, if required)		-	
24. Initial wt of thimble (gm)	1.2559	25. Final wt of thimble (gm)	1.2754
26. Wt. of PM (mg)	19.5	27. Particulate matter (mg/Nm³)	20.79
28. Barometric Pressure Head	748 mm of Hg.	29. Diameter of the nozzle	9.525 mm
30. Others:-		31. Thimble No.	GF-817
32. Sampled by:		Sri S. Dutta, AEE, H.R.O.	

Junior Scientist

Yudhajit Chaudhury 30/08/2016
Scientist & In-Charge

Copy to:
1. Chief Engineer, O & E.WBPCB.
2. Sr. Environmental Engineer, Camac Street, WBPCB.
3. Environmental Engineer, H.R.O., WBPCB (two copies)

RASHMI METALIKS LTD. KOL.

ENVIROCHECK
LABORATORY ACCREDITED BY NABL

189 & 190 Rastraguru Avenue, Kolkata - 700028 Phone : (033) 2579-2889/2891/2549-7490/64591174
Fax : (033) 2529-9141 / E-mail : envcheck@cal2.vsnl.net.in/ Website : www.envirocheck.org

Certificate No. : 3451

STACK GAS ANALYSIS REPORT

1.	Name of the Industry	:	Rashmi Metaliks Ltd.
2.	Address	:	Vill. - Gokulpur, P.O. - Shyamraipur, Kharagpur, Paschim Medinipur
3.	Date of sampling	:	30.05.2016
4.	Report No.	:	103/EC/May/TR(A)/I/16-17
5.	Analysis completed on	:	02.06.2016
6.	Reporting Date	:	04.06.2016

A. GENERAL INFORMATION ABOUT STACK

1.	Stack attached to	:	Pellet Pre Heater Discharge (No.1)
2.	Shape of Stack	:	Circular
3.	Material of Construction	:	Concrete & M.S.
4.	Height of Stack from G. L. (mtr.)	:	50.0
5.	Stack I.D. at sampling point (mtr.)	:	3.0
6.	Height of sampling port from G. L. (mtr.)	:	--
7.	Capacity	:	1850 TPD
8.	Emission due to	:	Combustion of Coal, Furnace Oil and Producer Gas

(a) Type of Fuel Used : Coal, Furnace Oil & Producer Gas

(b) Fuel Consumption : F.O. – 4 KL/Day
Coal – 54 MT/Day
Producer Gas – 6000 m^3/Day

Coal	Cal-Value (K-Cal/kg.) – 4800	Ash Content (% by Wt.) – 38	Sulphur Content (% by Wt.) – 0.4
F.O.	Cal-Value (K-Cal/kg.) – 11000	Ash Content (% by Wt.) – 0.1	Sulphur Content (% by Wt.) – 2.5

9.(a)	Permanent ladder & platform	Yes	(b) Pollution Control Device	:	E.S.P

B. RESULTS OF SAMPLING

SL. NO.	PARAMETERS	METHOD NO.		RESULTS
1.	Flue Gas Temperature (°C)	IS : 11255 (Part 1)	:	143.0
2.	Barometric Pressure (mm of Hg.)	--	:	755.0
3.	Velocity of Gas flow (m/s)	IS : 11255 (Part 3)	:	12.02
4.	Quantity of Gas flow (Nm^3/hr.)	IS : 11255 (Part 3)	:	212523.83
5.	Concentration of SO_2 (mg/Nm^3)	IS 11255 (Part 2)	:	235.20
6.	Concentration of CO_2 % (v/v)	IS 13270	:	9.6
7.	Concentration of CO %(V/V)	IS 13270	:	<1.0
8.	Concentration of Particulate Matter (mg/Nm^3)	IS 11255 (Part – 1) & ASTM D 3685/D 3685M	:	21.54

Remarks : *All the information under column A are supplied by the respective industry.*

Date : 04.06.2016

Authorised Signatory

RASHMI METALIKS LTD.

Annexure-II

ENVIROCHECK
Environmental Laboratory
109 & 110, Bastraguru Avenue, Kolkata-700 028
Phone : 2579-2889/2891, 2549-7490
Fax : 2527 8141
E-mail : envicheck@cal2.vsnl.net.in

AMBIENT AIR ANALYSIS REPORT

1.	Name of the Industry	:	Rashmi Metaliks Ltd.
2.	Address	:	Vill. – Gokulpur, P.O. – Shyamraipur, P.S. – Kahragpur (Local), Paschim Midnapore
3.	Date of sampling	:	08.03.2017 – 09.03.2017
4.	Report No.	:	19A/EC/March/TR(A)/II/16-17
5.	Analysis completed on	:	11.03.2017
6.	Reporting Date	:	15.03.2017
7.	Particular of Plant	:	Integrated Steel Plant

A] GENERAL INFORMATION

1.	Location of Sampling	:	Near Plant Main Gate (Kharagpur)
2.	Duration of Sampling	:	24 hrs. (09:00 a.m. – 09:00 a.m.)

B] METEOROLOGICAL INFORMATION

1.	Average Temperature (°C)	:	29.0
2.	Average Relative Humidity (%)	:	62.0
3.	Barometric Pressure (mm of Hg)	:	755.0
4.	Smell or Odour	:	No Remarkable Smell
5.	Weather Condition	:	Clear sky

C] RESULTS

SL. NO.	PARAMETERS	METHOD NO.		RESULTS
1.	Concentration of $PM_{2.5}$ ($\mu g/m^3$)	USEPA 1997a, 40 CFR Part 50, Appendix L	:	51.80
2.	Concentration of PM_{10} ($\mu g/m^3$)	IS 5182 (Part 23)	:	87.10
3.	Concentration of SO_2 ($\mu g/m^3$)	IS 5182 (Part 2) & ASTM D 2914-01	:	12.52
4.	Concentration of NO_x ($\mu g/m^3$)	IS 5182 (Part 6) & ASTM D 1607-91	:	35.01
5.	Concentration of CO (mg/m^3)	IS 5182 (Part 10) & ASTM D 3162-94	:	1.26
6.	Concentration of Pb ($\mu g/m^3$)	IS 5182 (Part 22) & ASTM D 4185-06	:	<0.01
7.	Benzo (a) Pyrene (BaP) (ng/m^3)	IS 5182 (Part 12) 2004 & ASTM D 6209-98	:	<0.36
8.	Benzene (C_6H_6) ($\mu g/m^3$)	IS 5182 (Part 11) 2006 & ASTM D 5466-01	:	<0.74
9.	Ozone (O_3) ($\mu g/m^3$)	IS 5182 (Part-IX)	:	<10.0
10.	Ammonia (NH_3) ($\mu g/m^3$)	NIOSH Manual of Analytical Method, 4th Edition 1994, Method 6015	:	<150.0
11.	Nickel (Ni) (ng/m^3)	IS 5182 (Part-22) 2004 & ASTM D 4185-06	:	<0.02
12.	Arsenic (As) (ng/m^3)	IS 5182 (Part 22) 2004 & ASTM D 4185-06	:	<0.01

Date : 15.03.2017

Authorised Signatory :

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AMBIENT AIR ANALYSIS REPORT

1.	Name of the Industry	:	Rashmi Metaliks Ltd.
2.	Address	:	Vill. – Gokulpur, P.O. – Shyamraipur, P.S. – Kahragpur (Local), Paschim Midnapore
3.	Date of sampling	:	08.03.2017 – 09.03.2017
4.	Report No.	:	19A/EC/March/TR(A)/III/16-17
5.	Analysis completed on	:	11.03.2017
6.	Reporting Date	:	15.03.2017
7.	Particular of Plant	:	Integrated Steel Plant

A] GENERAL INFORMATION

1.	Location of Sampling	:	At Malancha Town (4 km. from plant)
2.	Duration of Sampling	:	24 hrs. (09:30 a.m. – 09:30 a.m.)

B] METEOROLOGICAL INFORMATION

1.	Average Temperature (°C)	:	29.0
2.	Average Relative Humidity (%)	:	62.0
3.	Barometric Pressure (mm of Hg)	:	755.0
4.	Smell or Odour	:	No Remarkable Smell
5.	Weather Condition	:	Clear sky

C] RESULTS

SL. NO.	PARAMETERS	METHOD NO.		RESULTS
1.	Concentration of $PM_{2.5}$ ($\mu g/m^3$)	USEPA 1997a, 40 CFR Part 50, Appendix L	:	51.48
2.	Concentration of PM_{10} ($\mu g/m^3$)	IS 5182 (Part 23)	:	82.50
3.	Concentration of SO_2 ($\mu g/m^3$)	IS 5182 (Part 2) & ASTM D 2914	:	9.50
4.	Concentration of NO_x ($\mu g/m^3$)	IS 5182 (Part 6) & ASTM D 1607	:	29.95

Date : 15.03.2017

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AMBIENT AIR ANALYSIS REPORT

1.	Name of the Industry	:	Rashmi Metaliks Ltd.
2.	Address	:	Vill. – Gokulpur, P.O. – Shyamraipur, P.S. – Kahragpur (Local), Paschim Midnapore
3.	Date of sampling	:	08.03.2017 – 09.03.2017
4.	Report No.	:	19A/EC/March/TR(A)/IV/16-17
5.	Analysis completed on	:	11.03.2017
6.	Reporting Date	:	15.03.2017
7.	Particular of Plant	:	Integrated Steel Plant

A] GENERAL INFORMATION

1.	Location of Sampling	:	Gokulpur (Village) (1.5 m. from plant)
2.	Duration of Sampling	:	24 hrs. (10:00 a.m. – 10:00 a.m.)

B] METEOROLOGICAL INFORMATION

1.	Average Temperature (°C)	:	29.0
2.	Average Relative Humidity (%)	:	62.0
3.	Barometric Pressure (mm of Hg)	:	755.0
4.	Smell or Odour	:	No Remarkable Smell
5.	Weather Condition	:	Clear sky

C] RESULTS

SL. NO.	PARAMETERS	METHOD NO.		RESULTS
1.	Concentration of $PM_{2.5}$ (µg/m³)	USEPA 1997a, 40 CFR Part 50, Appendix L	:	51.44
2.	Concentration of PM_{10} (µg/m³)	IS 5182 (Part 23)	:	90.88
3.	Concentration of SO_2 (µg/m³)	IS 5182 (Part 2) & ASTM D 2914-01	:	6.49
4.	Concentration of NO_x (µg/m³)	IS 5182 (Part 6) & ASTM D 1607-91	:	25.03

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AMBIENT AIR ANALYSIS REPORT

1.	Name of the Industry	:	Rashmi Metaliks Ltd.
2.	Address	:	Vill. – Gokulpur, P.O. – Shyamraipur, P.S. – Kahragpur (Local), Paschim Midnapore
3.	Date of sampling	:	08.03.2017 – 09.03.2017
4.	Report No.	:	19A/EC/March/TR(A)/V/16-17
5.	Analysis completed on	:	11.03.2017
6.	Reporting Date	:	15.03.2017
7.	Particular of Plant	:	Integrated Steel Plant

A] GENERAL INFORMATION

1.	Location of Sampling	:	Kalaikunda Village
2.	Duration of Sampling	:	24 hrs. (10:30 a.m. – 10:30 a.m.)

B] METEOROLOGICAL INFORMATION

1.	Average Temperature (°C)	:	29.0
2.	Average Relative Humidity (%)	:	62.0
3.	Barometric Pressure (mm of Hg)	:	755.0
4.	Smell or Odour	:	No Remarkable Smell
5.	Weather Condition	:	Clear sky

C] RESULTS

SL. NO.	PARAMETERS	METHOD NO.		RESULTS
1.	Concentration of $PM_{2.5}$ ($\mu g/m^3$)	USEPA 1997a, 40 CFR Part 50, Appendix L	:	49.79
2.	Concentration of PM_{10} ($\mu g/m^3$)	IS 5182 (Part 23)	:	87.50
3.	Concentration of SO_2 ($\mu g/m^3$)	IS 5182 (Part 2) & ASTM D 2914-01	:	5.80
4.	Concentration of NO_x ($\mu g/m^3$)	IS 5182 (Part 6) & ASTM D 1607-91	:	20.19

Date : 15.03.2017

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RASHMI METALIKS LTD. KOL.

Annexure - III

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FUGITIVE AIR ANALYSIS REPORT

1.	Name of the Industry	:	Rashmi Metaliks Ltd.
2.	Address	:	Vill. – Gokulpur, P.O. – Shyamraipur, P.S. – Kahragpur (Local), Paschim Midnapore
3.	Date of Sampling	:	08.03.2017
4.	Report No.	:	19A/EC/March/TR(A)/VII/16-17
5.	Analysis completed on	:	11.03.2017
6.	Reporting Date	:	15.03.2017
7.	Particulars of Plant	:	Integrated Steel Plant

A] GENERAL INFORMATION

1.	Location of Sampling	:	Raw Materials Handling Plant (3)
2.	Duration of Sampling	:	08 hrs. (09:30 a.m. – 05:30 p.m.)

B] METEOROLOGICAL INFORMATION

1.	Average Temperature (°C)	:	31.2
2.	Average Relative Humidity (%)	:	72.0
3.	Barometric Pressure (mm of Hg)	:	755.0
4.	Smell, if any	:	No Remarkable Smell

C] RESULTS

SL. NO.	PARAMETERS	METHOD NO.		RESULTS
1.	Concentration of SPM (µg/m³)	IS 5182 (Part 4) & ASTM D 4096	:	506.54

Date : 15.3.2017

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FUGITIVE AIR ANALYSIS REPORT

1.	Name of the Industry	:	Rashmi Metaliks Ltd.
2.	Address	:	Vill. – Gokulpur, P.O. – Shyamraipur, P.S. – Kahragpur (Local), Paschim Midnapore
3.	Date of sampling	:	08.03.2017
4.	Report No.	:	19A/EC/March/TR(A)/IX/16-17
5.	Analysis completed on	:	11.03.2017
6.	Reporting Date	:	15.03.2017
7.	Particulars of Plant	:	Integrated Steel Plant

A] GENERAL INFORMATION

1.	Location of Sampling	:	Pellet Plant Area – (I) Area
2.	Duration of Sampling	:	08 hrs. (10:15 a.m. – 06:15 p.m.)

B] METEOROLOGICAL INFORMATION

1.	Average Temperature (°C)	:	32.4
2.	Average Relative Humidity (%)	:	74.0
3.	Barometric Pressure (mm of Hg)	:	755.0
4.	Smell / Odour	:	No Remarkable Smell

C] RESULTS

SL. NO.	PARAMETERS	METHOD NO.		RESULTS
1.	Concentration of SPM (µg/m³)	IS 5182 (Part 4) & ASTM D 4096	:	232.15

Date : 15.03.2017

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RASHMI METALIKS LTD.

Annexure-VI

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DRINKING WATER ANALYSIS REPORT

1.	Name of the Industry	:	Rashmi Metaliks Ltd.
2.	Address	:	Gokulpur, P.O. – Shyamraipur, P.S. – Kharagpur, Paschim Midnapore
3.	Report No.	:	Env/647/W/M(ii)/16-17
4.	Sampling Date	:	08.03.2017
5.	Reporting date	:	17.03.2017
6.	Type of sample	:	Drinking Water
7.	Sampling location	:	Pellet Plant – I Area

PARAMETERS			RESULTS	LIMIT as per IS-10500, 2012	
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source
1.	Colour	:	1.0	5.0	15.0
2.	Odour	:	Odourless	Agreeable	Agreeable
3.	Taste	:	Acceptable	Agreeable	Agreeable
4.	pH	:	7.21	6.5-8.5	No Relaxation
5.	Total Hardness (as $CaCO_3$) (mg./l)	:	72.0	200.0	600.0
6.	Calcium (as Ca) (mg./l)	:	16.03	75.0	200.0
7.	Magnesium (as Mg) (mg./l)	:	7.68	30.0	100.0
8.	Chloride (as Cl) (mg./l)	:	7.71	250.0	1000.0
9.	Iron (as Fe) (mg/l)	:	0.33	0.3	No Relaxation
10.	Total Arsenic (as As) (mg./l)	:	<0.01	0.01	0.05
11.	Cadmium (as Cd) (mg./l)	:	<0.01	0.003	No Relaxation
12.	Total Chromium (as Cr) (mg./l)	:	<0.05	0.05	No Relaxation
13.	Copper (as Cu) (mg./l)	:	<0.04	0.05	1.5
14.	Cyanide (as CN) (mg./l)	:	<0.05	0.05	No Relaxation
15.	Lead (as Pb) (mg./l)	:	<0.088	0.01	No Relaxation
16.	Mercury (as Hg) (mg./l)	:	<0.001	0.001	No Relaxation
17.	Nitrate (as NO_3) (mg./l)	:	1.28	45.0	No Relaxation
18.	Total Dissolved Solids (mg/l)	:	167.0	500.0	2000.0

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19.	Phenolic Compounds (as C_6H_5OH) (mg./l)	:	<0.1	0.001	0.002
20.	Zinc (as Zn) (mg./l)	:	0.09	5.0	15.0
21.	Sulphate (as SO_4) (mg./l)	:	3.12	200.0	400.0
22.	Turbidity (NTU)	:	<1.0	1.0	5.0
23.	Fluoride (as F) (mg./l)	:	<0.1	0.2	1.0
24.	Residual Free Chlorine (mg./l)	:	<0.04	0.2	1.0
25.	Manganese (as Mn) (mg./l)	:	<0.1	0.1	0.3
26.	Total Alkalinity as calcium carbonate (mg./l)	:	116.0	200.0	600.0
27.	Aluminium (mg./l)	:	<0.2	0.03	0.2
28.	Boron (mg./l)	:	<0.1	0.5	1.0
29.	Total Coliform (CFU/100 ml.)	:	Absent	Shall not be detectable in any 100 ml. sample	--
30.	E. Coli (CFU/100 ml.)	:	Absent	Shall not be detectable in any 100 ml. sample	--
31.	Feacal Coliform (CFU/100 ml.)	:	Absent	Shall not be detectable in any 100 ml. sample	--

*CFU indicates Colony Forming Unit

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RASHMI METALIKS LTD. KOL

Annexure-I

RISK ASSESSMENT & DISASTER MANAGEMENT PLAN

1.0 PROJECT BACKGROUND

M/s Rashmi Metaliks Limited has an Integrated Steel Plant & Ductile Iron Pipe Plant and has already obtained EC on 12.06.2008 ; 01.06.2012 from MoEF, New Delhi for integrated steel plant and on 09.10.2009 for Ductile Iron Pipe Plant of 2,00,000 TPA from SEIAA West Bengal and necessary NOC, CFO for running its unit. Its registered office is at Premlata Building, 6th Floor, 39-Shakespeare Sarani, Kolkata – 700 017 in West Bengal.

M/s Rashmi Metaliks Limited at present operating Sinter Unit (50,000 TPM), Mini Blast Furnace (14,000 TPM), SMS (15,500 TPM), Rolling Mill (9600 TPM), Ductile Iron Pipe (11833 TPM), Coal Gasifier (6000 Nm^3/hr) at village - Gokulpur, P.O. Shyamraipur, Kharagpur. District Paschim Mednipur in West Bengal. For the above said unit EC obtained vide File No J-11011/227/2010-IA-II (I) dated 12th, June, 2008 of MoEF, New Delhi.

M/s Rashmi Metaliks Limited (RML) is also operating 0.9 Million Tons Per Annum (MTPA) Iron Ore Pelletisation Plant installed and commissioned at village Gokulpur, PO Shyamraipur, PS: Kharagpur in West-Midnapore district of West Bengal. The 0.9 MTPA Pellet Plant was installed after obtaining Consent to Establish from West Bengal Pollution Control Board (WBPCB) on 12.08.2010. Pellet production was started after obtaining Consent to Operate from WBPCB on 02.08.2012. The Consent to Operate dated 02-08-2012 was amended to produce 0.9 MTPA Pellets (75000 tons per month) vide letter 22.08.2014. MoEF&CC vide letter F.No.L-11011/12/2014-IA.II (I) dated 8.9.2014 directed all the Pellet Plants that are operating without obtaining Environmental Clearance under EIA Notification 2006 to obtain it in order to comply with Hon'ble NGT Order 05 dated 28.05.2014. **MOEF&CC issued EC vide File No-J-11011/372/2014-I A II (I); dated 6th Dec 2016.** This report has been prepared as per the TOR and submitted for appraisal by the Expert Appraisal Committee – Industry (1) of MOEF&CC.

Rashmi Group founded in 1966 really got impetus from its real promoter. Rashmi Group of companies is a fast growing Group in the field of manufacturing steel and cement. The company has developed core competence in minerals, steel and cement with 40 years of experience. The Group's turnover is around Rs.2100 Crores and net worth is Rs.2139 Crores. Rashmi Group awarded 'Ultra Mega Project' status by Govt. of West Bengal. The Group is also engaged in import/export of Mineral & Mineral based products. The growth of the group during last few years has been phenomenal and fast catching the attention of bankers, professionals and industry as a whole.

PROPOSED PROJECT SITE

The principal features or highlights of the proposed Integrated Steel plant Project of **M/s Rashmi Metaliks Limited** under study are as follows:

Location	Village Gokulpur, P.O.-Shyamraipur, P.S. Kharagpur, in Paschim Medinipur District of West Bengal. Its graphical coordinates are Latitude 22°21'33" N to 22°21'38" N and Longitude 87°17'14"E to 87°17'46"E with mean sea level 86 m.
Land requirement	Inside RML Complex comprising 144 acres in village: Gokulpur, out of which the installed and commissioned Pellet Plant is located on 10 acres land
Raw water requirement & source	Water requirement for Pellet Plant – 100 KLD. Domestic use - 20 KLD Source: Ground water (permission available)
Power requirement	5 MW (from SEB)
Effluent generation & disposal	Plant is designed and is being operated at Zero water discharge. Domestic effluents after treatment in Sewage Treatment Plant will be reused for the greenery purpose.
Air pollution control	a) Raw Material Handling- Bag Filter in close circuit. b) Coal grinding - Bag Filter in close circuit. c) Flux grinding- Bag Filter in close circuit. d) Proportionating section- Bag Filter e) Ball Mill- Bag Filter f) Travelling grate- Multicyclone in close circuit & ESP g) Cooler discharge: ESP h) Finished product handling - Bag filter i) Stack height 45 m
Solid Waste Management	➢ Tailings from Iron Ore Beneficiation unit is used in sinter plant of Rashmi Metaliks Limited & land filling. ➢ Dust collected in the de-dusting system of the Pellet Plant is used in the process ➢ Tailing is used for abandoned Murom khadan filling
Manpower	200 persons
Project cost	Rs. 170 Crores

The project configuration of the units with rated capacity per annum is presented in **Table-1.1**

TABLE-1.1
PROPOSED PROJECT CONFIGURATION

Sr.No.	Units	Project Configuration	Product
1	Iron Ore Pellet Plant	0.9 MTPA	Iron Ore Pellet

2.0 RISK ASSESSMENT

Responsible environmental and climate protection is an important corporate objective. We will be use available resources responsibly and make efforts to protect the diversity of our natural environment. The processes we shall be use in production and our broad range of environment- and climate-friendly products deliver important contributions to the future viability of the Group and to solving global challenges.

The importance of environmental and climate protection at RASHMI Group is reflected in the appointment of a Group environment and climate officer as part of our reorganization in 2012. Given our nationwide activities, the objective was to set a framework for a Group wide environmental and climate policy, network existing knowledge and coordinate transnational environmental and climate protection activities.

The risk policy at Rashmi Group is based on our corporate strategy. It is directed at safeguarding the existence of the Company and sustainably increasing its value. To achieve success in business, opportunities must be recognized and associated risks identified and evaluated. We make optimum use of opportunities and consciously take and actively manage business risks insofar as they are expected to deliver an appropriate increase in value.

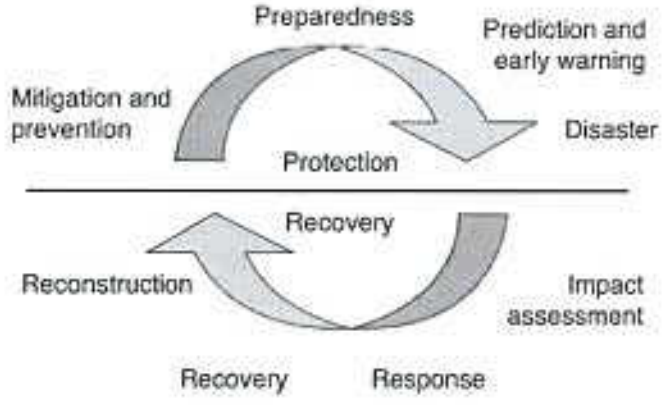
Risks that lie outside our core processes and capabilities are transferred where required to other risk carriers or reduced by appropriate risk containment measures. Beyond this we avoid risks wherever possible. Overall the Group can cover in full any risks taken.

Rashmi Group has documented the framework conditions for orderly and forward-looking risk management in its revised Group Policy Statement on Risk Management. All employees are required to be aware and accountable when dealing with risks and opportunities in their sphere of competence. Responsibility for identification and management of risks along the value chain lies with the operating managers in the decentralized organizational units.

The risk policy principles include a code of conduct applicable throughout the Group. For example, conduct towards suppliers, customers and other business partners must be fair and responsible. The Group's compliance standards must be observed and speculative transactions are inadmissible. We carry out regular control measures to check whether these principles are being observed. In addition, numerous compliance and risk management training programs are organized and repeated to communicate the importance of these principles to all level of employees.

A major accident in an industry has the potential to cause serious injury or loss of life and extensive damage to environment or property or serious disruption outside the plant. It may require the assistance of outside emergency services to effectively handle the situation. Accidents are normally caused by a number of different factors, e.g. plant failure, human error, earthquake, vehicle crash or sabotage. An important element of risk mitigation is emergency preparedness, which is recognizing the potential situations & consequences and prepare on site emergency plan.

RISK MANAGEMENT



CRISIS MANAGEMENT

For hazard identification, maximum credible accident (MCA) scenarios have been assessed. The maximum credible accident has been characterized as an accident with a maximum damage potential and the occurrence of which is most probable. Based on MCA scenario, the following hazards were identified from this project.

a) Fire in coal yard: This is the most common accident known to occur in any plant storing and handling coal. Since such incident takes sufficient time to get widespread, enough response time is available for plant personnel to get away to safer distance. An elaborate fire hydrant network and fire fighting system comprising of trained crew and facilities will mitigate the risk of such incidents. In case of bunkers / tunnel, alarm system and smoke detectors should be installed.

b) Fire in 2x250 KL Fuel Tanks: Light Diesel Oil is viscous mixture of aromatic hydrocarbons with flash point and auto ignition point higher than naphtha, petrol, diesel and kerosene. It is flammable and needs source of ignition to catch fire. Its vapour pressure is also higher than its other counterparts. Hence, fire risk due to storage and handling of LDO is less compared to naphtha, petrol and HSD. LDO have boiling point above the ambient temperature and therefore stored in tanks under normal atmospheric pressure and temperature. Continuous release of such non-boiling liquids from vessels due to leaks will form a contained pool inside the dyke area of the Tank. Upon ignition the liquid pool will result in pool fire. In case of ignition of the hydrocarbon vapour-air mixture present near rim seals and rim vents of storage tanks, tank fire will occur.

Pool fire and Tank fire falls under MCA scenario: The heat radiation effect distances for the largest tank combination are described below.

- 1st degree burn - 4.0 KW/m^2
- 1% fatality - 12.7 KW/m^2 for 20 seconds exposure

[EIA manual of MOEF prescribes thermal limit of 12.7 for 20 seconds exposure]

- 50% fatality - 25.0 KW/m^2
- 99%fatality - 37.5 KW/m^2

The following assumptions have been considered during modeling:

- Steady state burning has been assumed.
- A surface radiation flux of 120 KW/m^2
- The flame is cylindrical in shape with the diameter based on the hydraulic diameter of the large area.
- The flames maintain a constant and uniform surface heat flux. No account is made for the pulsation effects.
- The effect of wind speed on the flame length is considered insignificant.

Computer Aided Management of Emergency Operations (CAMEO software) and USEPA guidelines (Central Federal Register - CFR 40, Part 68, 1998 titled "Chemical Accident Prevention Provision") have been followed for end-point distance calculation. Wind speed affects the flame parameters in two ways, namely flame length and flame tilt. At a low wind speed, the flame length is more, which reduces with increase in wind speed, whereas the tilting of the flame in the direction of wind increases with higher wind speed. Hence a largely tilted flame intensifies radiation at any point in the direction of wind and on the contrary large flame length poses greater threat at any point from radiation point of view. For similar fire sizes the effect distances under 3 m/s wind speed is significantly larger than those distances under 1.5 m/s wind speed. This is due to tilting of flame under higher wind speeds (21 to 47 degrees tilt). For 1.5 m/s stable atmosphere (F class stability), 5 degree tilt has been considered in the cases of pool fire.

Consequence of Fire: The summary of the consequence modeling results for Pool fire is shown below:

Endpoint distance [1% fatality - 8.3 KW/m² for 20 seconds exposure] In case of pool fire pertaining to total 500 KL fuel, the thermal damage for 1% fatality under 3 m/s wind speed, B class stability 19.5 m.

In case of pool fire pertaining to 500 KL fuel, the thermal damage for 1% fatality under 1.5 m/s wind speed, E class stability is 23.2 m.

Worst damage distance [99% fatality - 37.5 KW/m²]
In case of pool fire pertaining to 500 KL fuel, the maximum thermal damage for 99% fatality under 3 m/s wind speed, B class stability is 11.5 m.

In case of pool fire pertaining to 500 KL fuel, the maximum thermal damage for 99% fatality under 1.5 m/s wind speed, E class stability is 8.5 m.

Maximum Consequence Tank Fire: The fire consequence of tank fire is less than that of pool fire; hence endpoint distances are not of any significant because risk management measures for pool fire consequence will be adequate for this scenario.

The probability of ignition of flammable vapors is given below:

Probability of Ignition of Flammable Vapors (Source DNV)

Continuous release rate (kg/s)	Instantaneous release rate (kg)	Ignition probability Immediate	Ignition probability Delayed	Ignition probability No Ignition
< 10	< 1000	0.2	0.05	0.75
10 to 100	1000 to 10000	0.5	0.1	0.4
> 100	>10000	0.7	0.2	0.1

c) Mechanical injury to body parts: In a steel plant there are several places where workers are likely to be involved with accidents resulting in injury to body parts. The places are workshop, during mechanical repair work in different units, during construction work, road accidents due to vehicular movement etc. Workers exposed to mechanical accident-prone areas will be given personal protective equipment. The non respiratory PPE includes tight rubber goggles, safety helmets, welders hand shields and welding helmets, plastic face shields, ear plugs, ear muffs, rubber aprons, rubber gloves, shoes with non-skid soles, gum boots, safety shoe with toe protection.

All safety and health codes prescribed by the BIS will be implemented. Safety data sheets of the hazardous chemicals will be displayed at specific locations. Fire hydrants will be located at all convenient and strategic points along the major drains

and checked for water availability on regular basis. Fire extinguishing equipment, sand buckets, water sprinklers and water hoses will be provided at all convenient point. Fire, heat, smoke and hydrocarbon detection alarms will be installed.

The likelihood of accidents and hazards has been assessed. In the absence of documented failure frequency data for this type of plant, a qualitative relative likelihood band of 'high', 'medium' or 'low' was assigned. The assessment of the potential likelihood of each scenario concluded that three of the scenarios pose a likelihood of 'low', and the three scenarios pose a likelihood of 'medium'. This was primarily as a result of following considerations:

- The chemical or material released not reaching an off-site receptor, due to the nature of the chemical or some form of on-site containment;
- The chemical not being sufficiently toxic, or present at a particular environmental receptor for a sufficient period of time, or at a sufficient level, to have an adverse effect on that receptor; and
- The absence of any significant environmental receptors in the vicinity of the site that could be affected by a release of any of the chemicals and materials released.

Fire Fighting System

Effective measures have been considered to minimize the fire hazard. Fire protection is envisaged through hydrant and sprinkler system, designed as per the recommendation of Tariff Advisory Committee of Insurance Association of India. The following areas in the power station are mainly susceptible to fire:

Cable Galleries

Electrical switchgear/MCC room, Coal handling area, conveyors, transfer points, tunnels and storage yard, Transformers and turbine oil tank

For containment of fire and preventing it from spreading in cable galleries, section wise fire barriers with self-closing fire resistant doors will be provided. The ventilation systems provided in cable galleries will be interlocked with the fire alarm system, so that in the event of a fire, the ventilation system gets automatically switched off. In order to avoid spreading of fire, all cable entries/openings in cable galleries, tunnels, channels, floors, barriers etc. will be sealed with noninflammable/ fire resistant sealing materials.

Fire hydrant points will be provided throughout the premises. Medium velocity spray system will be provided for protection of transformers, cable galleries, fuel oil and turbine oil storage tanks and coal conveyor galleries. Water for hydrant, spray and sprinkler systems will be supplied from the fire water pumps located in fire water pump house adjacent to cooling water pond. The hydrant system is designed as an ordinary hazard class. Portable fire extinguishers are provided at strategic locations throughout the plant. Fire detection and alarm system will be provided to detect fire/smoke in vulnerable areas of the plant through smoke / heat detectors.

2.1 HAZARDS IDENTIFICATION & RISK ANALYSIS (HIRA)

A critical part of any safety and health program is the identification, assessment, elimination and/or the control of hazards in the workplace.

It is impossible to eliminate all hazards, so the goal is to eliminate and/or control the hazards with critical and high potential and to reduce the rest of the hazards to the lowest reasonable risk level so as to protect workers from harm. This process is called risk assessment, and it is the evaluation of hazards to determine their potential to cause an accident

2.1.1 TYPES OF HAZARDOUS & CONTROL METHOD

A. During coming & going to duty

- High Concentration of Traffic during duty hours
- Heterogeneous Traffic
- Violation of Traffic Rules / Speed limit
- Road condition
- Condition of Vehicles

What we should do:

- Check vehicles (Break, Light, Horn, Air etc.)
- Start little early
- Maintain safe Rules / give correct signals
- Use crash Helmet

B. Common Hazardous

A. **Manual**: Excess load, Harmful Contact, lack of concentration etc.

B. **By Cranes** : Defective Tackles, slings, Excess Load, Wrong signals, Working under load, Unskilled operator, Defects in crane, Improper / unauthorized handling.

C. **Working at Height**

- Medically Unfit
- Working without protection (PPE's, Safety Belt etc.)
- Unsafe scaffolding / Excess loading
- Unsafe Access
- Over crowding
- Working without permission

D. Working in Confined space

- Working without right element
- Unauthorized Entry
- No Protocol
- Inadequate supervision
- Poor ventilation / No fresh Air
- Poor Illumination
- Use of 230-V Hand lamps
- No Emergency preparedness

E. Working at or Near Gas Line

- Lack of skill / Knowledge
- Working in empty stomach
- Not using safety Appliances
- Without protocol / clearance / Shut Down
- Using improper Tools

F. Working with Electrical Equipment

- Violation of shut down procedure
- No Earthling / Isolation
- Using Improper Tools
- Lack of knowledge / Electrical work by Non-electrical persons
- Temporary / Un-safe connection
- Safety Application not used

G. Electrical Shock

- Strength of leakage current
- Duration of shock / current flow through Body part
- Current Path through Body
- Position / condition of person in contact with live part

H. Standard Means of Protection

- Inspection / Testing of Portable Equipment / Tools by experienced / Qualified persons
- Rating of circuit, Breakers / Switches to Handle Fault current
- Use of cartridge Fuse in place of wire fuse
- Periodically checking of Earth continuity / Earth Resistance

2.2 RISK MITIGATION MEASURES

1. Appropriate storage facilities will be provided for special requirements such as for substances that are flammable and incompatible by-product and waste types will be kept separate.

2. After constructing the plant and based on actual inventorization of hazardous chemicals that are stored inside the premises, their exact location and appointment of O&M staff, RIIL project management team will carry out a detailed risk analysis. Based on the results of consequence analysis and end-point distances, On-site and Off-site Disaster Management Plan will be prepared as per the guidelines of Factories Act. The Plan will be prepared in consultation with the district administration and got approved by the Hazard Control Cell of the district. Name and contact numbers of plant personal, concerned government officials, police station, fire station, ambulance, district hospital staff will be mentioned in the plan.

3. Passive mitigation measures that will be considered are dyke walls around the liquid fuel storage tanks, enclosures, drains, sumps, fire walls, etc, wherever necessary. Adequate capacity dyke wall around the tank to contain the entire volume of tank in case of spill will be made.

4. It is recommended to locate the fuel tanks at least 40 m away from the plant boundary so that societal risk is avoided.

5. Active mitigation measures that will be considered are water sprinkler system, water curtain, flares, scrubbers, emergency shut-down system, etc.

6. In case of spillage or leaks in storage tanks leading to containment of flammable liquid, vaporization will be avoided by placing fume suppression chemicals over the surface of liquid [they provide a curtain over relevant sections]. Water spray systems or foaming systems will be used over storage tanks, and storage vessels.

7. Emergency isolation valves at critical locations on equipments / piping will be placed to isolate high inventory of hydrocarbons.

8. Nitrogen / steam purging facilities will be provided on critical equipment / system for driving out hydrocarbons.

9. In case of fire, the cooling of adjoining tanks will be started immediately. It is also necessary to cool the tank on fire.

10. Non-essential plant personnel (office staff, administration and accounts staff) will be located away from the storage area outside the zone of 4KW/m2 radiation intensity.

11. All hazardous storage systems will be designed with safety features as appropriate and recommended to enhance the safety against design failure.

12. Pumps of reliable quality will be installed. Arrangements will be made around the pumps so that leaks from glands, valves or joints can be contained locally.

13. Earthling of road tankers carrying flammable chemicals will be made before unloading to eliminate possibility of static sparks.

14. All lighting and electrical equipment in the unloading area and flammable chemicals storage area will be suitable to the area classification approved by Competent Authority.

15. Safety showers and eyewash fountains will be provided in section where caustic soda, acid and other corrosive or reactive chemicals are handled.

16. Pressure detectors will be installed for oil & gas transportation pipelines, the indication of which will be seen in the control room. This would enable the control room to detect any leakage in the pipelines forwarding fuels / products

17. Minor leaks could occur in routine operations, like pump seal failure, flange leak, sample point valve left open or drain valve left open. These will be checked regularly by a preventive maintenance program and rectified immediately.

18. Corrosion protection methods for pipelines will be done. All locations where the above ground pipelines are close to traffic movement, protection like crash guards will be provided.

2.3 FACILITIES AVAILABLE WITH THE FACTORY

a) Fire Fighting Facility

The entire factory will be protected with fire extinguishing system from outside and inside the shop floor.

b) Material Handling

Heavy duty cranes including mobile cranes, forklifts, trucks, trolleys will be used in the plant. The same could be used at time of emergency for handling the material.

c) Personnel Protective Equipments

Safety shoe, safety helmets, safety goggles, asbestos hand gloves, rubber hand gloves, acid proof aprons, earplugs, aprons, leg guards etc. will be made available in the Central store of the plant. At the time of emergency, the same can be made easily available by safety coordinator.

d) Medical Facility

The Plant will have the required emergency medical facilities and health check up for the workers will be done regularly by the Doctor in the own Health Centre. In case of major accident, persons will be referred to nearest Local Hospital / Nursing Home / ESI Hospital.

3.0 DISASTER MANAGEMENT PLAN

The Disaster/ Emergency Management Plan are the multi agency preparedness and response plan for dealing with all types of emergencies: natural disasters and manmade events.

Important elements of the DMP include planning, emergency response, and hazard specific measures, and inventory of resources. Whether it is a small law and order disturbance or a big natural disaster, the collective resources of the industry and nearby locality must be harnessed to address and mitigate the problem in the most efficient way. The DMP is therefore based on active participation of government agencies, private sector and NGOs.

A disaster / critical incidents are any event or situation that threatens public order involving people and/or their homes, businesses, or comm. unity. While we often think of floods, earthquakes or civil disturbances as constituting disasters, the true definition of a disaster / critical incident includes any situation which requires swift and decisive action involving multiple components in response to and occurring outside of the normal course of routine business activities. The scope of disaster therefore includes all the critical incidents such as natural disasters, civil disturbances, major accidents, and terrorist acts

STRATEGIC OBJECTIVE:

Pre-disaster planning is an integral part of preparedness and leads towards a holistic approach to disaster management. A Disaster Management Plan focusing on hazard, risk, vulnerability and resource assessment improves the level of response following a calamity on the one hand and provides insights to link it with development initiatives, on the other. The Burdwan district administration is the focal point for implementation of all government plans and activities. Therefore, planning at the district level is crucial for efficient management of all disasters.

The goal of disaster management planning is the establishment of a Disaster/

Emergency Management Plan. Developing the concept requires all the responder agencies, private sector organizations, and NGOs to cooperate to reduce the consequences of natural, technological, and manmade disasters. Response is the central focus during a disaster, but an integrated approach to planning will initiate mitigation activities to prevent or reduce the degree of risk, and to develop preparedness activities to increase response and recovery capabilities.

The district police, state fire services and civil defense routinely respond to emergency situations, but there are a number of incidents, which have an over whelming impact on the resources and expertise of these responder agencies.

The process of joint planning and response encompasses a number of steps and various terms may be used interchangeably by the responder agencies. Consequently, part of the planning process must include the different Government authorities like

District / Additional District Magistrate's Office, Paschim Medinipur

District Police, Paschim Medinipur

Agencies / Organizations:

West Bengal Fire Services, Kharagpur, Paschim Medinipur

Directorate of Factories, West Bengal

Health Department, Paschim Medinipur District

NGOs

Supportive Departments / Agencies / Organizations:

West Bengal State Power Distribution Company Limited

Bharat Sanchar Nigam Limited, Kharagpur Division

West Bengal State Road Transport Corporation

Anyone or more of the following uncontrollable factors may cause disaster:

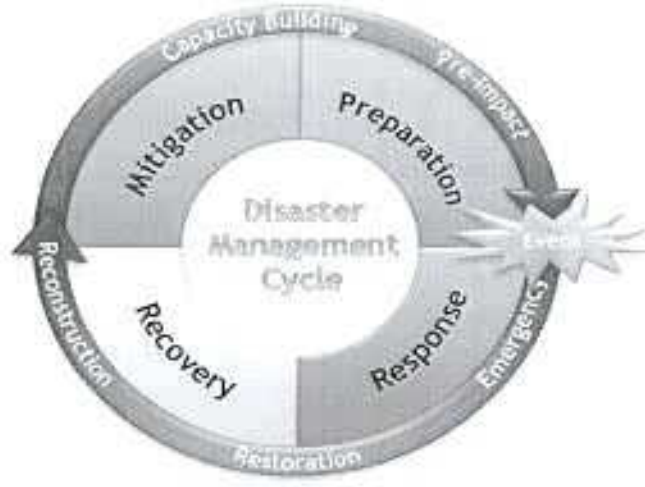
1. Reduction or failure of cooling water
2. Failure of Power
3. Rupture or damage of the line, vessel or tank
4. Excessive leakage of inflammable or corrosive or toxic material
5. Cyclone
6. Earthquake
7. Fine or explosion

8. Sabotage
9. Riot
10. Air Raid

The Disaster Management Plan of the company is divided into two parts:

(i) Onsite Emergency Plan
In this plan, the company officers are given pre-designated responsibilities for dealing with the emergency.

(ii) Offsite Emergency Plan
In this, different Govt. agencies will be conformed about the emergency for necessary help from them.



The quantum of risk posed by an industry depends not only on the hazardous chemicals being used, stored, handled or manufactured, but also on the industry management, level of safety awareness among employees and the safe practices and preventive measures followed while handling these chemicals. The main areas considered for management capability are as follows:

Compliance with existing Rules and Regulations: The following statutory provisions to be complied by RIIL:

- The MSIHC Rules, 1989/2000 notified under the Environment Protection Act, 1986.
- Rules on Emergency planning, Preparedness and Response for Chemical Accidents.
- Hazardous Wastes (Management and Handling Rules) 2000
- Factories Act, 1987 (Amended)
- Public Liability Insurance Act, 1991

- Air Act, 1981 and Water Act, 1974

Engineering Aspects: This includes the factory layout and following general features of the facility.

1. Demarcation with proper boundary wall
2. Green belt and buffer zone
3. Segregation of process and utility blocks
4. Access for emergency vehicle movement
5. Adequacy of exit and entry points
6. Ventilation of process area
7. Dying of hazardous material storage tanks
8. Source of process knowhow and documentation
9. Use of codes and standards
10. Third party inspection

Process Aspects: This include the process safety angle like reaction characterization (is the reaction well characterized in terms of runaway potential, exo-therms, heat of reaction, etc.), existence of high temperature pressure alarms, back up indicators, annunciate panel, etc. and existence of process control through PLC, single loop controls, interlocks, etc.

Emergency response: It includes the emergency preparedness of the installation like

1. Working on-site emergency plan
2. Fire protection system in terms of fire water storage, hydrant, sprinkler, foam, fire alarms, smoke detectors and gas detectors
3. Emergency power
4. First aid, emergency vehicle and medical provisions
5. Back-up communication
6. Training and mock drill
7. Personnel Protective Equipment and Self contained breathing apparatus

Management System: It includes the management commitment within the organization.

Existence of professionals in key factory positions Safety, health and environment function **ISO: 14000** and **ISO: 9000** certification, safety and environment policy System for recording near miss and accident investigation
Workers awareness of hazards involved

Operation and Maintenance System: This includes, Existence of SOP for all critical operations Inserting systems used for reactors, tanks, pipelines, etc.

Preventive maintenance system

System for implementing plant modifications

The aim of hazard control and disaster management is concerned with preventing accidents through standard design and efficient operation, preventive maintenance, inspection and proper usage of safety measures by which it is possible to reduce the risk of an accident. RIIL will coordinate with the District Administration and adopt all measures to minimize the effect of disaster. The objective will be to localize the emergency and, if possible, eliminate it and minimize the effects of the disaster on workforce and surrounding community. The EMP formulates a procedure for controlling disaster with minimum damage to men, material and machines, evacuating the victims to safer places, rescuing the victims and providing them medical treatment, rehabilitating the affected areas, delegating specific tasks to staff (avoid overlapping of activities within various groups) and preserving relevant records as evidence in any subsequent inquiry.

1. Elimination of hazards will require prompt action by operators and emergency staff and mobilizing fire-fighting equipment, emergency shut-off valves and water sprays. To minimize the effects of a disaster, prompt operation for providing rescue, first aid, evacuation, rehabilitation and right information to people living in nearby areas is necessary.

2. Emergency team leader is called site main controller (SMC) who will be the plant manager. He will lead the emergency response team. In his absence the senior most people available at plant will act as emergency team leader. Besides the top officials described above, rest of the employees will be divided into three action teams namely A, B, C. Action team A consists of staff of section in which accident has occurred. Action team B consists of staff of non-affected section and maintenance department. Action team C consists of supporting staff i.e. security supervisor, shift supervisor and ancillary people comprising of contractor, labor.

3. Team A will initiate action in case of an emergency. Team B will help team A by remaining in their respective sections and preparing to comply with specific instructions of SMC. Team C consisting of supporting staff will help Team A as and when required and receive direction from Team B to act. Team C will help in evacuating the affected personal to safer place, under the supervision of Team B. A multi-channel communication network will connect Site Emergency Control Room (SECR) to control rooms of various other departments and the nearest fire station, medical centre and district hospital.

4. The onsite emergency will in all probability commence with fire or burns and the victims will be the members of operational staff on duty. In case a staff member on duty spots the emergency, he (as per site emergency procedure of which he is adequately briefed) will go to nearest emergency (fire) alarm location. He will try his best to inform the exact location and nature of emergency to the fire fighting station. In accordance with work emergency

procedure, the following key activities will immediately take place to control the emergency.

5. On site crew will arrive at the site of incident with fire extinguishers and necessary equipment.

6. Emergency security controller will commence his role from main gate office.

7. Incident controller will arrive at SECR with members of his advisory and communication team and assume absolute control of the site. He will receive information continuously from incident controller and give decisions and directions to the following:

   a) Incident controller
   b) Plant control rooms
   c) Emergency security officer
   d) Site or shift medical officer

8. After all the key emergency personnel have taken up their respective positions, the incident controller will use communication system to convey and receive the messages. At the site of incident the incident controller will directly handle the emergency with the help of specific support group such as Team C and fire fighting personnel. At the main gate, the Emergency Security Controller and Personnel Manager will contact external agencies. At the site medical center / first aid center, the Medical Officer will take control of medical support services. Site Main Controller will direct and decide all issues and direct the following aspects:

   a. Whether the incident controller requires reinforcement of manpower and facilities.
   b. Whether the plant operation will be shut down or kept in running condition.
   c. Whether the staff in other locations will be kept indoors or evacuated and assembled at predefined safe areas.
   d. Whether the missing staff members will be searched or rescued.
   e. Whether off-site emergency plan will be activated and message to that effect will be sent to the District Headquarter /Administration.
   f. Whether and when outside emergency services will be called.
   g. Respond to any large size complaints from outside public and to assess an off-site impact arising out of the on-site emergency.

9. On receiving the message of Disaster from site main controller (SMC), fire control room attendant will sound siren 'wailing type' for 5 minutes. Incident controller will arrange to broadcast disaster message through public address system. On receiving the message of 'Emergency Over' from incident controller the fire control room attendant will sound alarm 'All Clear Signal' straight for

two minutes. The features of alarm system will be explained to one and all to avoid panic or misunderstanding during disaster.

10. On receiving the signal following actions will be taken:

a. All the members of advisory committee, personnel manager, security controller, etc. will reach the SECR.
b. The process unit persons will remain ready in their respective units for crash shutdown on the instruction from SECR.
c. The persons from other sections will report to their respective officer.
d. The concerned section will take immediate action to remove contractor's personnel outside the plant gate.

11. When the incident has eventually been brought under control as declared by the incident controller, the SMC will send two members of his advisory team as incident site for the following purpose:

a. To conduct an on-the-spot assessment of total damage and prevalent condition with particular attention to possibility of recurrence of the emergency situation, which may be temporarily under control?
b. To inspect other parts of site which might have been affected by impact of incident?
c. To inspect the personnel collection centers and roll call centers, to check if all persons on duty have been accounted for.
d. To inspect all the control rooms of the plant in order to assess and record the status of respective plants and to supervise any residual action that is deemed necessary.

12. Once the emergency situation comes under control, the advisory team will return to SECR with their observations, report and submit the findings in writing to SMC. Based on the reports, SMC will communicate further directives to all emergency management sub-centers and finally declare and communicate termination of emergency and authorize step by step restoration of normal operation of the affected plant. Emergency security controller and personnel manager will deal with all the members of public and other local bodies from the main gate office. During the entire period of emergency, the site will remain out of bounds to external visitors except for the following officials:

a. District fire personnel
b. District hospital ambulance staff
c. Civil/ Defense personnel
d. District administration
e. Factory Inspectorate Officers and Labour Commissioner
f. Officers of State Pollution Control Board
g. Insurance authorities.

13. Effective working of rescue team is essential during the disaster. In order to make the services of rescue team more effective following equipment will be provided to the team.

a) Chemical cartridge type gas mask (self-contained breathing apparatus)
b) Self rescue type gas filters (with oxygen cylinder or compressed air)
c) Mechanical filters
d) Fire proximity suits, asbestos aprons or aluminized asbestos suits)
e) Safety helmets
f) Face shields (Asbestos or PVC)
g) Petromax lamp/Torches
h) Axes/hand saw
i) Fire entry suits
j) Fire blankets
k) Gloves (PVC, asbestos, special rubber make)
l) Ropes
m) Ladders
n) Rubber glove (tested up to 25000 volt.)
o) Blanket
p) Rubber sole shoes and gum boots
q) Safety shoes with toe protection
r) Shoes with non-skid soles
s) Safety belt with life line (leather, hard rubber or neoprene)

14. In view of vulnerability to fire, effective measures have been considered to minimize fire hazard. Fire protection is envisaged through hydrant and sprinkler system, designed as per the recommendation.

15. For detection and protection of the plant against fire hazard, any one or a combination of the following systems will protect susceptible areas.

a. Hydrant system
b. Medium velocity spray system
c. Portable fire extinguishers
d. Fire alarm system

16. Fire hydrant points will be provided at all necessary places. Medium velocity spray system will be provided for protection of transformers, cable galleries and coal storage areas. Water for hydrant, spray and sprinkler systems will be supplied from the fire-water pumps located in water pump house. The hydrant system will be designed as an ordinary hazard class. Adequate number of portable and mobile chemical fire extinguishers (Carbon dioxide, dry chemical powder, foam types) will be provided at strategic locations throughout the plant. Fire detection, heat detection, hydrocarbon detection and alarm system will be provided to detect fire/ heat/ smoke/ hydrocarbons in vulnerable areas of the plant.

3.1 ON-SITE EMERGENCY PLAN

Emergency planning is an integral part of the overall loss control programme and is essential for our organization. The same is important for effective management of an accident to minimize the losses to the people and property, both in and around the facility. The important aspect in emergency management is to prevent by technical and organizational measures, the unintentional escape of hazardous materials out of the facility and minimize accidents and losses. Emergency planning demonstrates the organizational commitment to the safety of employees and increases our organization's safety awareness.

Name and address of the person furnishing the information:

Name of the Occupier : Sri. Surendar Jha (Director)
Address : RASHMI Metaliks Limited
Premlata, 6th Floor , 39, Shakespeare Sarani
Ph: 033-2289-4254
Fax: 033-2289-5200

LEGAL REQUIREMENT

As per the provision stipulated under Section-41 B (4)of the Factories Act,1948 (as amended), Rule 13 (1) of MSIHC Rules, 1989 (1994,2000) and Rule 47 safety precaution , schedule V Power Process, Rule 50 A, Precaution against electrical Hazardous, Rule 52A Protection of equipment, Rule 56 Pressure vessel & Plant, Rule 61, Fire and Rule 62, First Aid & Fire Fighting arrangement of Schedule –I & II of the West Bengal Factories Rules,1958.

On-site Emergency Plan with detailed disaster control measures for the installation and workers employed in the plant is being prepared.

OBJECTIVE

The main objective of On-site emergency management plan (On-SEMP) is in emergency management planning is to ensure that everyone knows:

- what are the hazards and risk in the plant
- what and how to do in the event of an emergency; and
- Preparations for potential and unexpected incidents at the workplace.

The types of emergencies to plan for include fire, explosion, toxic releases, injuries and rescues in the hazardous events. Plan improves local, district, state and national capacity to respond to disasters and public health emergencies, scaling up

the actions with vulnerable communities in health promotion, disease prevention and disaster risk reduction.

As per our Indian regulations we have regulatory provisions that On-site Emergency Management Plan (On-SEMP) will be prepared by industrial units and Off-site Emergency Management Plan (Off SEMP) by District Collector.

An occupier will prepare and keep an up-to date on-site emergency plan containing details specified in Schedule 11 of Manufacture, Storage and Import of Hazardous Chemicals (MS&IHC) Rules 1989 and detailing how major accidents will be dealt with on the site on which the industrial activity is carried on and that plan will include the name of the person who is responsible for safety on the site and the names of those who are authorized to take action in accordance with the plan in case of an emergency. The occupier will ensure that the emergency plan prepared takes into account any modification made in the industrial activity and that every person on the site who is affected by the plan is informed of its relevant provisions.

The occupier will prepare the emergency plan required –

(a) In the case of a new industrial activity, before that activity is commenced;

(b) In the case of an existing industrial activity within 90 days of commencing into operation of these rules.

On-site emergency can be due to the following causes

Man-made Cause	Natural Cause	Extraneous
Fire	Flood	Riots / Civil disorder
Explosion	Earthquake	Terrorisms
Failure of critical control system	Cyclone	Sabotage
Design deficiency	Outbreak of Disease	Bomb Threat
Unsafe Acts	Extensive Rains	War/Hit by missiles
In-adequate maintenance	Tsunami	Abduction
		Food poisoning / Water Poisoning

3.2 KEY ELEMENTS OF THE ON-SEMP

Emergencies can happen at any time in any types of industry, due to fire in a process area, tank form area, toxic gas/liquid release into the area from storage

vessels or piping network, or a bomb threat. The approach of the plan is to eliminate or reduce the risk of injury or harm that may occur during an evacuation by undertaking following steps:-

a. Classification and identifying potentially hazardous situations;
b. Assessment of the risks;
c. Implementation and compliance of the regulatory provisions as per the Manufacture, Storage & Import of Hazardous Chemicals (MS and IHC) Rule1989 and Chemical Accidents (Emergency Planning, Preparedness and Response) [CA (EPPR)] Rules 1996 schedule;
d. Consequences of defaults or non-compliance of regulations;
e. Statutory requirements;
f. Pre-emergency planning;
g. Emergency mitigation measures;
h. Emergency preparedness measures;
i Emergency response procedures and measures;
j. Emergency organization and responsibilities;
k. Infrastructure requirements;
l. Procedures for declaration of on-site and off-site emergency;
m. Resources for controlling emergency;
n. Demographic information;
o. Medical facilities;
p. Evacuation;
q. Public relations and information to public;
r. Reporting of the incident;
s. Emergency recovery procedures;
t. Emergency plans for tank trucks and pipelines carrying hazardous products;
u. Integration of the On-SEMP with Off SEMP of the district and ultimately with Authority (NDMA) guidelines and action plan on Chemical (Industrial) Disasters;

3.3 PRE- EMERGENCY PREPAREDNESS

This may have following components:

-Information on the preliminary hazard analysis:

-Type of accident

-System elements or events that can lead to a major accident

-Hazards

-Safety relevant components

-Details about the site

-Location of dangerous substances.

-Seat of key personnel

-Emergency control room

-Description of hazardous chemicals at plant site:

-Chemicals (Quantities and toxicological data)

-Transformation if any, which could occur.

-Purity of hazardous chemicals.

-Likely dangers to the plant.

-Enumerate effects of Accident

-Stress and strain caused during normal operation

-Fire and explosion inside the plant and effect if any, of fire and explosion outside

3.4 EMERGENCY LEVEL CLASSIFICATION

M/s Rashmi Metaliks Limited should clearly make an effort and differentiate the type of emergencies. During operational period many near misses and small accidents may be happening at shop or floor level.

To help industry the emergencies can be categorized into three broad levels on the basis of seriousness and response requirements, namely:

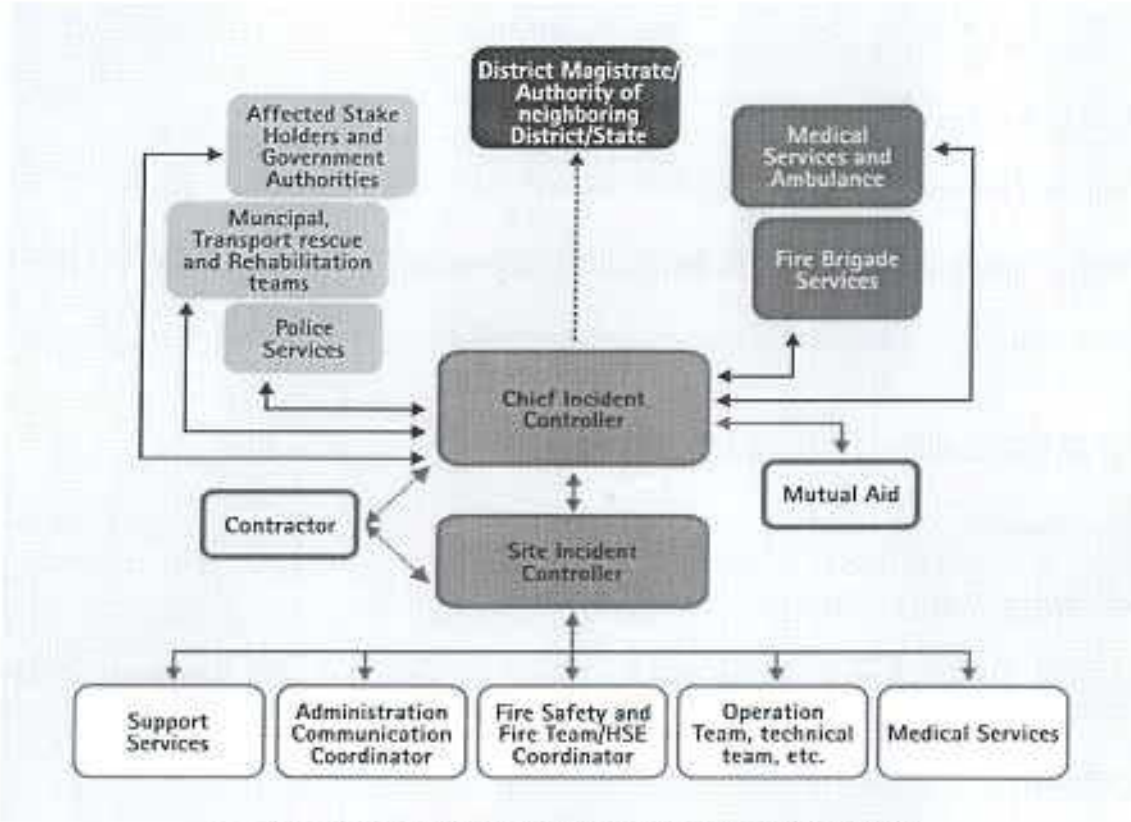
(a) Level 1: This is an emergency or an incident which;

- Can be effectively and safely managed, and contained within the site, location or installation by the available resources;
- Has no impact outside the site, location or installation site of the machineries

(b) Level 2: This is an emergency or an incident which;

- Cannot be effectively and safely managed or contained at the location or installation by available resource and additional support is alerted or required.
- Is having or has the potential to have an effect beyond the site, location or installation and where external support of mutual aid partner may be involved;
- Is likely to be danger to life, environment or to industrial assets or reputation.

(c) Level 3: This is an emergency or an incident with off-site impact which could be catastrophic and is likely to affect the population, property and environment inside and outside the installation, and management and control is done by district administration. Although the Level-III emergency falls under the purview of District Authority but till they step in, it should be responsibility of the unit to manage the emergency.



ON SITE EMERGENCY MANAGEMENT PLAN

3.5 OFF SITE EMERGENCY PLAN

Type of emergency facilities/ actions required from outside bodies:

a) Fire fighting facilities required: Factory will have its own fire fighting facilities but during emergency, fire brigade may be called.

b) Police help required during emergency for evacuation of the people, traffic control security arrangements etc. will be available.

c) Medical help required: seriously injured personnel may be referred to the local Hospital/Nursing Home/ESI Hospital depending upon the gravity and type of injuries.

3.6 EDUCATION OF PUBLIC

People living within the influence zone will be educated on the emergency in a suitable manner. This can be achieved only through the Local and District Authorities. However, necessary information can be extended to the Authority.

Annexure-VI

Green Belt Development Pictures

RASHMI GROUP

Annexure-VII

RASHMI METALIKS LTD. (RML)

Expenses on account of "Enterprise Social Responsibility"(ESR)for the period (Apr'2016 –Mar'2017)

Particulars	***Approx Amount (Rs.)***
Activities On Educational Field(Donations to Schools for building construction, Purchasing reference books for the students, Distribution of cots to school hostels, to develop IT education, Distributing special awards to the meritorious students)	**12,00,000.00**
Book Fair Organized by different local organizations, NGOs, Local Club.	**18,00,000.00**
Art Exhibition- To encourage Local Artists – we organized **Art Exhibitions** in different villages/ in different areas of Kharagpur Town to show their talent and culture.	**6,00,000.00**
Sports- To encourage the younger generations. We organized different competitions on Foot Ball, Cricket & Volley Ball in villages through different clubs of villages.	**7,00,000.00**
Cultural Activities- To boost up the talent of School Children, we conducted Debate Competitions, Essay Writings, Poem & Drawing Competitions.	**1,00,000.00**
Developing Roads, Repairing Roads in different localities of Kharagpur (Local & Town).	**20,00,000.00**
Helping Hand to the Poor Villagers:	
Blanket Distribution in different villages.	**6,50,000.00**
Free eye check up camp & spectacle distribution.	**2,80,000.00**
Helping Poor Villagers on their Daughter's Marriage.	**3,00,000.00**
Helping Poor Villagers on Medical Treatment.	**7,00,000.00**
Helping Poor Villagers on Cremation Ceremony.	**1,00,000.00**
Active Participation & Co-operation with Local-Administration	**3,00,000.00**

RASHMI METALIKS LTD. KOL.

Traffic Police – making arrangement for Road Barriers	**1,00,000.00**
Expenses relating to Worker Welfare	**4,50,000.00**
Medical:	
Ambulance for 24 hrs. Service to the locality	**7,50,000.00**
Development of Local Health Centres	**7,50,000.00**
Financial Help to Blood Donation Camps which was organized by Local people in different places	**5,00,000.00**
Green Belt Development in Local Area	**4,00,000.00**
Spiritual :	
For New Temple Constructions.	**7,00,000.00**
For Repairing of Old Temples.	**1,50,000.00**
Contribution for Different Periphery Festivals:	**16,50,000.00**
For the Locality:	
Fire Tender for 24 hrs Service to the locality.	**6,50,000.00**
Rescue operations:	
Natural Calamities	**20,00,000.00**
Grand Total (Rs.)	**1,68,30,000.00**

Annexure-VII

ESR Work Picture

Road Construction

Free Eye Camp Chekup

Blood Donation Camp

METALIKS LTD

ESR Work Picture

RASHMI GROUP

Colour & Craft (Workshop for Art & Craft)

Blanket Distribution

RASHMI METALIKS LTD.

Enterprise Social Responsibility Detail

ESR Activities proposed by RML during Next 4 year Period

Sl. No.	Activity Heads	YEARS (RS. IN LACS)				Total Amt (Rs in Lacs)
		1st	2nd	3rd	4th	
1	HEALTH & FAMILY WELFARE PROGRAMMES	25	25	25	25	100
2	EDUCATION PROMOTION PROGRAMMES	12	13	12	13	50
3	WOMEN EMPOWERMENT & DEVELOPMENT	12	13	12	13	50
4	CONTRIBUTION IN RELIGIOUS & SOCIAL PROGRAMMES	6	6	7	6	25
5	COMMUNITY INFRASTRUCTURE DEVELOPMENT INCLUDING RWH STRUCTURES	37	37	38	38	150
6	DEVELOPMENT OF FARMERS	13	12	13	12	50
GRAND TOTAL		105	106	107	107	425 Lakhs

We, **M/s Rashmi Metaliks Limited,** a company duly incorporated under the Companies Act, 1956, having its registered office at Premlata Building, Sixth Floor, 39-Shakespeare Sarani, Kolkata – 700 078, do hereby solemnly confirm to do ESR **as per the detail mentioned**

I here by certified that, all the statements made in the above paragraphs here in above are true to the best of my knowledge and belief.

For **Rashmi Metaliks Limited**

Date-01.09.2016

(Authorized Signatory)

Annexure-IX

ENVIROCHECK

Environmental Laboratory
159 & 159, Bactragachi Avenue, Kolkata-700 028
Phone : 2577-2889/2891, 2549-7490
Fax : 2529-9141
E-mail : envicheck@cal2.vsnl.net.in

EFFLUENT WATER ANALYSIS REPORT

1.	Name of the Industry	:	Rashmi Metaliks Ltd.
2.	Address	:	Gokulpur, P.O. – Shyamraipur, P.S. – Kharagpur, Paschim Midnapore
3.	Report No.	:	Env/645/W/M(ii)/16-17
4.	Date of sampling	:	08.03.2017
5.	Reporting date	:	17.03.2017
6.	Type of sample	:	Industrial Effluent Water (grab)
7.	Collection & preservation of sample	:	APHA 22nd Edition, 1060
8.	Location of sample	:	Near Pellet Plant – I
9.	Sample collected in presence of	:	Company Representative

	PARAMETERS	TEST METHODS		RESULTS
1.	pH	APHA 22nd Edition, 4500-H+B	:	6.90
2.	Total Suspended Solids (mg./l)	APHA 22nd Edition, 2540 D	:	28.0
3.	Oil and Grease (mg./l)	APHA 22nd Edition, 5520 B/D	:	5.0
4.	COD (mg./l)	APHA 22nd Edition, 5220 B/C/D	:	100.0
5.	BOD [3 days, 27°C] (mg./l)	APHA 22nd Edition, 5210-B	:	<2.0

Authorised Signatory :

Dr. Ajoy Paul
(Scientist)

RASHMI METALIKS LTD. KOL.

ENVIROCHECK
Environmental Laboratory
189 & 190, Rastraguru Avenue, Kolkata-700 028
Phone : 2579-2889/2891, 2549-7450
Fax : 2529-9141
E-mail : envicheck@cal2.vsnl.net.in

LECHATE STUDY REPORT

1.	Name of the Industry	:	Rashmi Metaliks Ltd.
2.	Address	:	Gokulpur, P.O. – Shyamraipur, P.S. – Kharagpur, Paschim Midnapore
3.	Date of sampling	:	08.03.2017
4.	Report No.	:	Env/646/L/M/16-17
5.	Reporting date	:	17.03.2017
6.	Type of Sample	:	Liquid Sample

Sl. No.	LOCATION	PARAMETERS (mg/kg.)						
		Fe	Zn.	Cr.	Cu	Ni	Pb	Cd
1.	Near Pellet Plant-I Area	680.0	52.0	2.80	16.50	7.20	5.0	<0.5
2.	Near DIP Plant	580.0	32.50	1.65	8.0	5.0	2.80	<0.5
3.	Near SMS Plant	168.50	36.50	1.80	7.0	3.82	3.50	<0.5

Authorised Signatory :

Dr. Ajoy Paul
(Scientist)

RASHMI METALIKS LTD. KOL

Annexure-X

ENVIROCHECK
House of Environmental Pollution Monitoring and Analysis
WBPCB & CPCB Recognized ISO 9001:2008, ISO 14001:2004 & OHSAS 18001:2007 Certified Laboratory

OHSAS 18001 : 2007

NOISE LEVEL SYUDY (AMBIENT)

1. **Name of Industry** : **Rashmi Metaliks Ltd**
2. **Address** : **Vill. – Gokulpur, P.O – Shyamraipur, Kharagpur (Local), Paschim Mednipur**
3. **Date of Study** : 08/03/17
4. **Height from Ground Level** : 4 ft
5. **Location** : Near Plant Main Gate (Kharagpur)

Time	Value db (A)		
	Max	Min	**Leq**
03.00PM - 03.20AM	64.1	58.2	63.26

ENVIROCHECK Kolkata 700028

Authorized Signatory & Stamp

H.O. : 18/9, Rastraguru Avenue, Kolkata - 700028 Phone No. 033-2579 2891, 2549 7490, Fax No. 033-2529 9141
Laboratory : 18/9, Rastraguru Avenue, Kolkata - 700028 Phone No. - 033-2579 2889
E-mail : envcheck@cal2.vsnl.net.in / Web : - www.envirocheck.org
Branch Office : Durgapur (+91 9674155172), [illegible] (+91 9830067046), Haldia (+91 9830067045), Dhanbad (+91 9830067045)

ENVIROCHECK
House of [illegible] Pollution Monitoring and Analysis
WBPCB & [illegible] ISO 9001:2008, ISO [illegible] & OHSAS 18001:2007 Certified Laboratory

JAS-ANZ OHSAS 18001 : 2007

NOISE LEVEL SYUDY (AMBIENT)

1. **Name of Industry** : Rashmi Metaliks Ltd
2. **Address** : Vill - Gokulpur, P.O – Shyamraipur, Kharagpur (Local), Paschim Mednipur
3. **Date of Study** : [illegible]/03/17
4. **Height from Ground Level** : [illegible] ft
5. **Location** : [illegible]ay Sitting

Time	Value db (A)		
	Max	Min	Leq
03.30PM [illegible]PM	[illegible].5	62.1	63.80

Kolkata 700 028

Authorized Signatory & Stamp

H.O. : [illegible] Avenue, Kolkata - 700028, Phone No. 033-2579 2891, 2549 7490, Fax No. 033-2529 9141
Laboratory : [illegible] Avenue, Kolkata - 700028 Phone No. - 033-2579 2889
E-mail : [illegible] / Website - www.envirocheck.org
Branch Office : [illegible] (+91 9874155172), Siliguri (+91 9830067046), Haldia (+91 9830067045), Dhanbad (+91 9830067045)

RASHMI METALIKS LTD. KOL.

NOISE LEVEL SYUDY (AMBIENT)

1. **Name of Industry** : **Rashmi Metaliks Ltd**
2. **Address** : **Vill. – Gokulpur, P.O – Shyamraipur,**
   Kharagpur (Local), Paschim Mednipur
3. **Date of Study** : **08/03/17**
4. **Height from Ground Level** : **4 ft**
5. **Location** : **Mahacho (Town) 4 km from Plant**

Time	Value db (A)		
	Max	Min	Leq
04.00PM - 04.10PM	64.1	61.2	63.10

ENVIROCHECK Kolkata 700 028 Rashbagan Avenue

Authorized Signatory & Stamp

NOISE LEVEL SYUDY (AMBIENT)

1. **Name of Industry** : **Rashmi Metaliks Ltd**
2. **Address** : **Vill. – Gokulpur, P.O – Shyamraipur, Kharagpur (Local), Paschim Mednipur**
3. **Date of Study** : **08/03/17**
4. **Height from Ground Level** : **4 ft**
5. **Location** : **Gokulpur (Village) 1.5 km from Plant**

Time	Value db (A)		
	Max	Min	Leq
04.30PM – 05.30PM	60.9	54.2	56.18

Authorized Signatory & Stamp

NOISE LEVEL SYUDY (SOURCE)

1. **Name of Industry** : **Rashmi Metaliks Ltd**
2. **Address** : **Vill. – Gokulpur, P.O – Shyamraipur, Kharagpur (Local), Paschim Mednipur**
3. **Date of Study** : **08/03/17 – 09/03/17 (24hrs)**
4. **Height from Ground Level** : **4ft**
5. **Location** : **Near Pellet Plant – I Area**

Time	Value db (A)		
	Max	Min	Leq
06.00AM - 07.00AM	62.5	71.8	68.12
07.00AM - 08.00AM	63.5	68.1	67.10
08.00AM - 09.00AM	62.8	71.5	67.23
09.00AM - 10.00AM	64.8	72.6	69.20
10.00AM - 11.00AM	65.2	72.8	70.10
11.00AM - 12.00PM	67.2	73.5	71.30
12.00PM - 01.00PM	62.8	72.5	70.46
01.00PM - 02.00PM	61.2	70.2	69.2
02.00PM - 03.00PM	62.5	68.4	66.23
03.00PM - 04.00PM	63.8	68.1	67.18
04.00PM - 05.00PM	65.2	69.2	68.10
05.00PM - 06.00PM	67.2	71.5	68.23
06.00PM - 07.00PM	65.8	72.6	68.26
07.00PM - 08.00PM	63.2	69.2	67.12
08.00PM - 09.00PM	64.5	68.2	67.20
09.00PM - 10.00PM	62.5	68.7	67.03
10.00PM - 11.00PM	63.2	69.2	67.28
11.00PM - 12.00AM	64.8	70.2	68.23
12.00AM - 01.00AM	61.8	68.2	65.31
01.00AM - 02.00AM	63.2	70.1	68.67
02.00AM - 03.00AM	64.2	68.5	67.32
03.00AM - 04.00AM	65.8	68.1	67.10
04.00AM - 05.00AM	63.2	68.5	65.38
05.00AM - 06.00AM	64.2	68.5	66.23
		Average Leq :	**67.82**

Authorized Signatory & Stamp

H.O. : 63/B, Rastraguru Avenue, Kolkata - 700028 Phone No. 033-2579 2891, 2549 7490, Fax No. 033-2529 9141
Laboratory : 189 & 190, Rastraguru Avenue, Kolkata - 700028 Phone No. - 033-2579 2889
E-mail : envcheck@cal2.vsnl.net.in / Website - www.envirocheck.org
Branch Office : Durgapur (+91 9674155172), Siliguri (+91 9830067046), Haldia (+91 9830067045), Dhanbad (+91 9830067045)

EMP Cost Breakup Detail

Sl. No.	Particulars	Details	Capital Cost Rs. crores	Annual Recurring Cost Rs. crores
1	Air Pollution Control Systems	ESP (3 field) attached to Travelling Grate and Discharge Cooler – Rs.180 Lakhs	3.5	0.12
		Multicyclone attached to Traveling Grate (2 Nos.)- Rs.50 Lakhs		
		Bag Filter attached to Coal Grinding Unit- Rs.20 Lakhs		
		Bag Filter attached to Flux Grinding Unit- Rs.30 Lakhs		
		Bag Filter attached to Proportioning Unit- Rs.30 Lakhs		
		Bag Filter attached to Raw Mill Feed (Ball Mill)– Rs.40 Lakhs		
2	Water conservation and recycling measures	Rain Water Harvesting Pond Pumps, Pipelines, etc	0.2	0.02
3	Wastewater Management and Effluent Treatment Plant	Cooling Tower, pipelines, pumps, – Rs.70 Lakhs	0.8	0.02
		Septic Tanks with Soak Pits (5 Nos.) -Rs. 10 Lakhs		
4	Environmental Management Department	EMD building / infrastructure	0.8	0.04
5	Environmental Monitoring Instruments and Laboratory	Water Lab, Air Lab, CEMS, CAAQMS	1.0	0.06
6	Noise Reduction Systems	Acoustic treatment of work rooms, pumps and fans	0.3	0.02
7	Occupational Health Management	Doctor, paramedic staff, medicines, first aid, ambulance,	0.3	0.08
8	Green Belt and Greenery Development	Purchase of trees, planting cost, cost of manure and watering	0.8	0.04
9	Solid Waste Management and Utilization	Pneumatic conveyors from hoppers to mixing bin	0.2	0.10
10	Risk Mitigation and Safety Plan Implementation	Fire hydrants, pipelines, fire extinguishers, water sprinklers	0.5	0.04
Total			**Rs.7.7 crores**	**Rs.0.54 crores**

For **Rashmi Metaliks Limited**

(Authorized Signatory)

Annexure - VII

Aajkal Eng... - 17.12.16

বিধাননগরের সেন্ট্রাল পার্কে শুরু সরস মেলা

ন্যাক-এর মূল্যায়নে 'এ' গ্রেড পেল প্রেসিডেন্সি

ম্যাথুর বিরুদ্ধে আপাতত ব্যবস্থা নিতে পারবে না কলকাতা পুলিস

প্রেসিডেন্সিতে অবরোধ

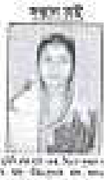
বেসরকারি চিকিৎসক নিয়োগের নির্দেশিকা বাতিলের দাবি

ভারতীয় ইঞ্জিনিয়ারিং কংগ্রেসের উদ্বোধন শহরে

রাহুলকে সুপারি দিয়েছিল অরুণ

জনসংযোগ, শিল্পোদ্যোগে বিশিষ্টদের পুরস্কার দিল পিআরএসআই

শীতে পুরীর ৮ জোড়া বিশেষ ট্রেন



পূর্ব রেলওয়ে

Tender Notice

Assistant Engineer, PWD

Tender Notice

NOTICE

NOTICE

NOTICE

NOTICE HAVING BEEN GIVEN THE LOSS OF ORIGINAL CERTIFICATE OF ... FORMERLY ... INVESTMENT CONSULTANTS PVT. LTD. ... KOLKATA ... SAID CERTIFICATE. IF FOUND ...

PUBLIC SERVICE COMMISSION, WEST BENGAL

IMPORTANT ANNOUNCEMENT

The Commission will take ... on ... in the Commission's Enquiry Counter ... website ...

Aajkal Bengali - 18/12/16

মুখ্যমন্ত্রীর উদ্যোগে

গড়বেতা-কাণ্ড: মৌলালিতে সভা, অবরোধ বামপন্থীদের

টেকনোর 'খুদে বিজ্ঞানীদের' মডেল প্রদর্শন শিলিগুড়িতে

বাড়ি নির্মাণঘটিত জটিলতা কাটাতে বিল্ডিং ট্রাইবুনাল

বকেয়া বিক্রয় করের ৬০ শতাংশ দিলেই ছাড় বাকি ৪০ শতাংশ

রাজধানী লেট

শিশুকন্যাকে মার? আটক বাবা-মা