

Ref: RCL/ENV_COMPL/June_2017

Date: 15.05.2017

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, Period from October 2016 to March 2017 for Expansion of Sponge Iron Plant (3, 00,000 MTPA to 6, 00,000 MTPA) and Ferro alloy Plant (72,000 MTPA) by M/s Rashmi Cement Limited, at Village-Gokulpur, P.O.-Shyamraipur, District-Paschim Midnapore, (W.B.)

Ref: -

1. EC: Ministry's letter No J-11011/604/2008.IA II (I) dated. 12th February, 2009

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-11011/604/2008.IA II (I) dated. 12th February, 2009 for Expansion of Sponge Iron Plant (3, 00,000 MTPA to 6, 00,000 MTPA) and Ferro alloy Plant (72,000 MTPA) at - Village-Gokulpur, P.O.-Shyamraipur, District-Paschim Midnapore, (W.B.), in the name of M/s Rashmi Cement 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 Cement 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. Monitoring Cell,
Ministry of Environment and Forests
Paryavaran Bhawan
CGO Complex, Lodi Road
New Delhi - 110 003

Enclosures:-

1. Compliance Report for EC; Dated 12.02.2009
2. Copy of AAQM Report as Annexure-I.
3. Copy of Fugitive Emission Report as Annexure II.
4. Copy of Latest Stack Monitoring Report as Annexure-III
5. Copy of Ground Water/Effluent Analysis Report as Annexure-IV.
6. CREP Detail enclosed as Annexure-V
7. TCPL report as Annexure-VI.
8. Copy of EAC Recommendation for Amendment in EC as Annexure-VII.
9. Copy of Ambient / Work Zone Noise Quality Monitoring Report Annexure-VIII.



SIX MONTHLY COMPLIANCE REPORT
FOR
M/s RASHMI CEMENT LIMITED

Project Name-

Expansion of Sponge Iron Plant (3, 00,000 MTPA to 6, 00,000 MTPA) and Ferro alloy Plant (72,000 MTPA)

EC NO- EC No-J -11011/604/2008-IA II (I), Dated 12.02.2009

Location: - Village-Jitusole, Junglekhas, District-Paschim Midnapore
(W.B.)



M/S RASHMI CEMENT LIMITED

HALF YEARLY ENVIRONMENTAL COMPLIANCE STATUS

REPORT- JUNE 2017

Period (October 2016 to March 2017)

Project Name-Expansion of Sponge Iron Plant (3, 00,000 MTPA to 6, 00,000 MTPA), Ferro Alloy Plant (72,000 MTPA)

Location: - Village-Jitusole; Junglekhas I.L. No-731 & Baghmundi I.L. No-928, District- Paschmi Medinipur (W.B.)

(Reference: EC No-J -11011/604/2008-IA II (I); Dated 12th February 2009)

A	Specific Conditions :	COMMENTS
1)	<p>Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan should be submitted. On-Line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks and sufficient air pollution control devices shall be provided to keep the emission levels below 100 Mg/Nm³. Data on ambient air quality and stack emissions shall be regularly submitted to this Ministry including its Regional Office at Bhubaneswar, CPCB and W.B Pollution Control Board (WBPCB) once in six months.</p>	<p>Adequate Measures have been taken for reducing the RSPM levels in the ambient air like</p> <ol style="list-style-type: none">1. Fixed water sprinklers are provided at the potential internal roads and raw materials handling areas.2. Two 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. <p>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.</p> <p>We have already installed Online Stack Continuous Emission Monitoring System and Opacity Meter in our major stacks and maintained emission levels as per CPCB / SPCB guide line and continuously doing the same in order to comply the direction under section 5 of the Environment (Protection) Act, 1986</p> <p>Ambient Air Quality monitoring reports (Parameters PM10, PM2.5, SO₂ and NO_x)</p>



		level) are attached in Analysis report Annexure-I for your ready reference.
ii)	Electrostatic precipitator (ESP) shall be provided to DRI plant and power plant to control air emissions within 100mg/Nm ³ . Hot gases from DRI kiln shall be passed through Dust Settling Chamber (DSC) to remove coarse solids and after Burning Chamber (ABC) to burn CO completely and used in waste heat recovery boiler (WHRB) to make use of flue gases generated during the process. The gas then shall be cleaned in ESP before leaving out into the atmosphere through ID fan and stack. Flue gases from Submerged Arc Furnace shall pass through heat exchanger, bag Filter system and then finally vented to atmosphere through a stack of adequate height.	<ul style="list-style-type: none"> Existing 10 X 100 TPD & 1 X 350 TPD capacity base SID units having 11 nos. of ESP's and 10 nos. of 10 TPH & 1 no of 39 TPH capacities Waste Heat Recovery Boilers (WHRB). Waste gas coming from the DRI kilns are passed through the Dust settling Chambers (DSC) for removing the coarse solids and then to After Burning Chambers (ABC) for completely burning out the Carbon Monoxide and sent to WHR boilers to produce maximum of 28 MW co-generation base captive power. Flue gases coming from the 2X9 MVA capacity Submerged Electrical Arc Furnace (SEAF) are passed through ID Fans & Bag Filters and lastly release through the stacks. Emission standard has been maintained as per CPCB & WBPCB guideline.
iii)	In-Plant control measures for checking fugitive emissions from all the vulnerable sources like cillago/raw materials/coal handling etc. shall be provided bag filters shall be provided at transfer points and de-dusting stacks to control fugitive emissions. Water sprinkling, black topping of internal roads and greenbelt development shall be carried out to control the fugitive dust emissions due to vehicular movement. Dust suppression and extraction system comprising of bag filters, spray nozzles dry fog system etc. shall be provided to control secondary fugitive emission during raw material handling and preparation.	<ul style="list-style-type: none"> Adequate steps has been taken for dust suppression and meet the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R No. 826(E) dated 16th November 2009. Preventive measures are taken to reduce fugitive emissions from all the vulnerable sources like use of water sprinklers, mechanical sweepers etc. We have pneumatic ash handling system with silos in all bag filters at outlet as well as in ESP's for preventing the fugitive emissions. All conveyors belt, vibrating screens and transfer points are covered with sheets for preventing the fugitive

		<p>emissions.</p> <ul style="list-style-type: none"> • We have installed around 72 no's of water sprinklers at different areas and regular 2 nos. of mobile water tankers spraying water for controlling the fugitive emissions inside and outside the plant. • Around 80 % of road inside the plant premises already concreted for controlling the fugitive as well as vehicular emissions. • Fugitive / Work zone monitoring results are attached in Annexure – II.
iv)	<p>Gaseous emission levels including secondary fugitive emissions from blast furnace and sinter plant shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB shall be followed. The emission standards issued by the Ministry in May, 2008 for the sponge plants shall be followed.</p>	<ul style="list-style-type: none"> • West Bengal Pollution Control Board inspects our plant and do sampling from all major stacks on regular basis. • Latest stacks analysis reports are attached in Annexure – III for your ready reference. • Blast Furnace and Sinter plant doesn't come under the proposed project
v)	<p>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.</p>	<ul style="list-style-type: none"> • We have installed ash handling silos with pug mill for controlling the fugitive emissions during the ash loading time • Ash transported by covered dumper for preventing the fugitive emission during the transportation • Raw Materials, finished products, etc. are also transfer either by covered vehicles or enclosed by the tarpaulins for controlling the fugitive emission.
vi)	<p>Total water requirement from Jhargram Municipality/PHE department shall not exceed 3.180 m³/day including existing requirement. All the wastewater from process and domestic sources shall be treated effluent and sewage treatment plant respectively and recycled and</p>	<ul style="list-style-type: none"> • Permission has been already obtained from Jhargram Municipality and State Water Investigation Department, Govt. of West Bengal.


 Date: _____
 Page: _____

	reused in the process, for dust suppression and green belt development. No wastewater shall be discharged outside the premises and 'Zero' effluent discharge shall be ensured.	<ul style="list-style-type: none"> • Our plant has been designed as 'Zero' discharged concept and it will be ensured by top management on regular basis • Waste water is being re-used for cooling, Dust suppression, Green Belt Development etc. after proper 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 is trying to reduce the unit wise water consumptions and reuse the water after treatment in the same unit. <p>Water/Effluent & Leachate Analysis Report is enclosed as Annexure-IV.</p>
vii)	The water consumption shall not exceed 16 m ³ /Ton of Steel as per prescribed standard.	<ul style="list-style-type: none"> • We are maintaining water consumption log sheet in daily basis and calculate the water consumption for per ton finished products production on regular basis.
viii)	Prior permission for the drawl of 3.180 m ³ /day water from Jhargarm Municipality/PHE department from the concerned department shall be obtained.	<ul style="list-style-type: none"> • Jhargram Municipal authorities actively consider our water requirements and SWID have given the necessary permission for withdrawing 1720 KLD water.
ix)	AFBC Plant shall be installed before installation of Sponge irons Plant so that utilization of char in the AFBC boiler is ensured. All the char from DRI plant shall be utilized in AFBC boiler of power plant and no char shall be disposed off anywhere else. As proposed, Iron ore fines and Coal fines shall be used in Sinter Plant and kiln accretion and slag in cement plant. All the other solid wastes including slag and broken refractory mass shall be properly disposed off in environment-friendly manner. Sludge from sewage treatment plant shall be used as manure in green belt development. Oily waste shall be provided to authorize recyclers/reprocesses.	<p>We are using imported coal which are having ash content less than 34% with high GCV value and the generation of char quantity is very low (caloric. Value 2000 to 2200 approx.), hence char is reused in Rotary Kiln as a substitute of coal for sponge iron production. After that char is re-used in AFBC Boiler (sister concern) to produce the power for Captive uses.</p> <ul style="list-style-type: none"> • Sludge is used as manure for Green Belt Development, we have already planted around 12,000 (2016 -2017) & proposed 10,000 for this year (2017-2018).

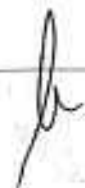
xiv)	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Sponge iron Plants shall be implemented.	<ul style="list-style-type: none"> • CREP will be complied in time bound frame. <p>Detail Enclosed as Annexure-V.</p>
xv)	The company shall provide housing for 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 housing may be in the form of temporary structures to be removed after the completion of the project.	<ul style="list-style-type: none"> • Providing hutment with drinking water, electricity and sanitation for all working labors adjacent the plant. Total existing hutment area is 10,347 square ft. • We are also providing four stored (20,000 square ft) staff quarter with drinking water, electricity and sanitation facilities.

A.	General Conditions :	Comments:
i)	The project authorities must strictly adhere to the stipulations made by the West Bengal Pollution Control Board (WBPCB) and the State Government	Adequate measure has been taken for pollution control and we are complying 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.
ii)	No further expansion or modifications in the plant shall be carried but without prior approval of the Ministry of Environment and Forests.	In compliance to this point RCL has presented the proposal (IA/WB/IND/5852/2008) as per EIA Notification 2006 under clause 7 (II) in front of EAC Industry-I MoEF, New Delhi in 10 th & 12 th Meeting for amendment in EC (Product Mix –Inclusion of Ferro Chrome with Ferro Alloy with same approved Capacity). Our proposal got recommendation by Honourable Committee member. Copy of Recommendation is enclosed as Annexure-VII.
iii)	The Gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19th May, 1993 and standards prescribed from time to time. The WBPCB may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time the emission level shall go beyond the	All the necessary measures have been adopted for preventing the gaseous emission on priority basis. The load mass based standards for the financial year 2015-2016 is submitted in prescribed format with Environmental Statement to WBPCB, vide letter ref. no. 02 / RCL/ENV _Statement / 2015-2016.

	prescribed standards. The interlocking facilities shall be provided so that process can be automatically stopped in case the emission level exceed.	
iv)	In plant control measures for checking the fugitive emission from all the vulnerable sources like spillage/ raw materials/ coal handlings etc. shall be provided. Further specific measures like provision of dust suppression system consisting of water sprinkling, suction hood, fan and bag filters etc. shall be installed at material transfer points and other raw material handling areas. Centralized de-dusting system i.e. collection of fugitive emissions through suction hood and subsequent treatment through bag filter or any other device and finally emitted through a stack of appropriate designed height conforming to the standards. Fugitive emissions shall be regularly monitored and records maintained.	<ul style="list-style-type: none"> • Pollution control equipment of latest technology and high efficiency has been installed in various units as per stability. All pollution control equipment such as ESP's , Bag filters, Bag Houses , Cyclones, agglomerator, wet scrubbers etc. are designed to meet the prescribed standard as per CPCB guide line. • Pulse jet bag filter is installed at Coal Circuit House, Intermediate Bin, Stock house and also provided with dry fog system for preventing the fugitive emissions. • Fugitive emission controls at all the vulnerable points have been considered by dust suppressions, dust / fumes extractions systems etc. as applicable in Sponge Unit, Ferro and Coal Circuit House, Stock house etc. • Fugitive Emission Analysis reports are attached as Annexure – II for your ready reference.
v)	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM10, SO2, 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 at Bhubaneswar, WBPCB and CPCB once in six months.	Ambient air quality monitoring is carried out on quarterly basis for all the 12 parameter specified in NAAQ Standard, 2009 by the NABL accredited laboratory. The reports are regularly being submitted to MOEF and WBPCB.
vi)	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.	<p>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.</p> <p>The detail about the Effluent, Leachate &</p>



		Ground water sampling Report is enclosed as Annexure—IV.
vii)	The overall noise levels in and around the plant area shall be kept well within the 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 (night-time).	Ambient & Work Zone Noise monitoring Analysis (inside the plant in different units) reports are attached as Annexure – VIII for your ready reference.
viii)	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.
ix)	The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Yes, we have 26000 cubic meter full fledge rain water harvesting pond in operation and 75,000 cubic meter (approx.) rain water harvesting ponds is in under constructional phase 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.
x)	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.
xi)	The project proponent shall earmarked Rs. 18.00 Crores and Rs 0.50 Crores towards capital cost and recurring cost/ annum for environmental pollution control measures to implement the conditions stipulated by the Ministry of Environment and Forest as well as the State Government. An implementation schedule for implementing all the conditions	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 is:



	stipulated herein shall be submitted to the Ministry's Regional Office at Bhubaneswar. The funds so provided should not be diverted for any other purpose.	CAPEX (as on date)-7.9 Crores OPEX (as on date)- 30 lac per year
xii)	The Regional office of this Ministry at Bhubaneswar/ CPCB/ WBPCB will monitor the stipulated conditions. A six monthly compliance reports and the monitored data along with statistical interpretation shall be submitted to them.	Being Compiled with. Six monthly compliance reports are being submitted in regular basis. This report is being submitted as compliance to this point.
xii)	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 and Forests 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 region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwards to the Regional office.	Already being compiled
xiv)	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



AMBIENT AIR ANALYSIS REPORT

1.	Name of the Industry	: Rashmi Cement Ltd. (Steel & Power Division)
2.	Address	: Jitusole, P.S. - Jhargram, P.O. - Garsalboni, Paschim Midnapore, Pin - 721507
3.	Date of sampling	: 13.03.2017 - 14.03.2017
4.	Report No.	: 312/EC/M/TR(A)/1/16-17
5.	Analysis completed on	: 17.03.2017
6.	Reporting Date	: 21.03.2017

A) GENERAL INFORMATION

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

B) METEOROLOGICAL INFORMATION

1.	Average Temperature ($^{\circ}\text{C}$)	: 31.0
2.	Average Relative Humidity (%)	: 76.2
3.	Barometric Pressure (mm of Hg)	: 757.0
4.	Smell or Odour	: No Remarkable Smell
5.	Weather Condition	: Clear sky

C) RESULTS

SL. NO.	PARAMETERS	METHOD NO.	RESULTS
1.	Concentration of $\text{PM}_{2.5}$ ($\mu\text{g}/\text{m}^3$)	USEPA 1997a, 40 CFR Part 50, Appendix L	: 51.80
2.	Concentration of PM_{10} ($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 23)	: 86.50
3.	Concentration of SO_2 ($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 2) & ASTM D 2914	: 7.19
4.	Concentration of NO_x ($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 6) & ASTM D 1607	: 32.60
5.	Concentration of CO (mg/m^3)	IS 5182 (Part 10) & ASTM D 3162	: 0.32
6.	Concentration of Pb ($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 22) & ASTM D 4185	: <0.01
7.	Benzo (a) Pyrene (BaP) (ng/m^3)	IS 5182 (Part 12) 2004 & ASTM D 6209	: <0.36
8.	Benzene (C_6H_6) ($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 11) 2006 & ASTM D 5466	: <0.74
9.	Ozone (O_3) ($\mu\text{g}/\text{m}^3$)	IS 5182 (Part-IX)	: <10.0
10.	Ammonia (NH_3) (mg/m^3)	NIOSH Manual of Analytical Method, 4 th Edition 1994, Method 6015	: <0.15
11.	Nickel (Ni) (ng/m^3)	IS 5182 (Part-22) 2004 & ASTM D 4185	: <0.02
12.	Arsenic (As) (ng/m^3)	IS 5182 (Part 22) 2004 & ASTM D 4185	: <0.01

Date : 21.03.2017

Authorised Signatory :



 Dr. Ajoy Paul
 (Scientist)


AMBIENT AIR ANALYSIS REPORT

1.	Name of the Industry	: Rashmi Cement Ltd. (Steel & Power Division)
2.	Address	: Jitusole, P.S. - Jhargram, P.O. - Garsalboni, Paschim Midnapore, Pin - 721507
3.	Date of sampling	: 13.03.2017 - 14.03.2017
4.	Report No.	: 312/EC/M/TR(A)/II/16-17
5.	Analysis completed on	: 17.03.2017
6.	Reporting Date	: 21.03.2017

A) GENERAL INFORMATION

1.	Location of Sampling	: Guest House
2.	Duration of Sampling	: 24 hrs. (09:30 a.m. - 09:30 a.m.)

B) METEOROLOGICAL INFORMATION

1.	Average Temperature ($^{\circ}\text{C}$)	: 31.0
2.	Average Relative Humidity (%)	: 76.2
3.	Barometric Pressure (mm of Hg)	: 757.0
4.	Smell or Odour	: No Remarkable Smell
5.	Weather Condition	: Clear sky

C) RESULTS

SL. NO.	PARAMETERS	METHOD NO.	RESULTS
1.	Concentration of $\text{PM}_{2.5}$ ($\mu\text{g}/\text{m}^3$)	USEPA 1997a, 40 CFR Part 50, Appendix I	46.02
2.	Concentration of PM_{10} ($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 23)	86.57
3.	Concentration of SO_2 ($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 2) & ASTM D 2914	5.56
4.	Concentration of NO_x ($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 6) & ASTM D 1607	24.95

Date : 21.03.2017

Authorised Signatory :



Dr. Ajoy Paul
(Scientist)



AMBIENT AIR ANALYSIS REPORT

1.	Name of the Industry	: Rashmi Cement Ltd. (Steel & Power Division)
2.	Address	: Jitusole, P.S. - Jhargram, P.O. - Garsalboni, Paschim Midnapore, Pin - 721507
3.	Date of sampling	: 13.03.2017 - 14.03.2017
4.	Report No.	: 312/EC/M/TR(A)/III/16-17
5.	Analysis completed on	: 17.03.2017
6.	Reporting Date	: 21.03.2017

A) GENERAL INFORMATION

1.	Location of Sampling	: Jitusole Village (4 km. from plant)
2.	Duration of Sampling	: 24 hrs. (10:00 a.m. - 10:00 a.m.)

B) METEOROLOGICAL INFORMATION

1.	Average Temperature (°C)	: 31.0
2.	Average Relative Humidity (%)	: 76.2
3.	Barometric Pressure (mm of Hg)	: 757.0
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/m ³)	USEPA 1997a, 40 CFR Part 50, Appendix L	: 45.87
2.	Concentration of PM ₁₀ (µg/m ³)	IS 5182 (Part 23)	: 78.22
3.	Concentration of SO ₂ (µg/m ³)	IS 5182 (Part 2) & ASTM D 2914	: 5.10
4.	Concentration of NO _x (µg/m ³)	IS 5182 (Part 6) & ASTM D 1607	: 20.12

Date : 21.03.2017

Authorised Signatory :



Dr. Ajoy Paul
(Scientist)



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 E-mail : envirocheck@col2.vsnl.net.in

FUGITIVE AIR ANALYSIS REPORT

1.	Name of the Industry	:	Rashmi Cement Ltd. (Steel & Power Division)
2.	Address	:	Jitusole, P.S. - Jhargram, P.O. - Garsalboni, Paschim Midnapore, Pin - 721507
3.	Date of sampling	:	13.03.2017
4.	Report No.	:	312/EC/M/TR(A)/IV/16-17
5.	Analysis completed on	:	17.03.2017
6.	Reporting Date	:	21.03.2017
A) GENERAL INFORMATION			
1.	Location of Sampling	:	Raw Materials Handling Plant (2)
2.	Duration of Sampling	:	08 hrs. (09:00 a.m. - 05:00 p.m.)
B) METEOROLOGICAL INFORMATION			
1.	Average Temperature (°C)	:	32.4
2.	Average Relative Humidity (%)	:	78.0
3.	Barometric Pressure (mm of Hg)	:	757.0
4.	Smell or Odour	:	No Remarkable Smell
C) RESULTS			
SL. NO.	PARAMETERS	METHOD NO.	RESULTS
1.	Concentration of SPM ($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 4) & ASTM D 4096	416.0

Date : 21.03.2017

Authorised Signatory :



 Dr. Ajoy Paul
 (Scientist)


FUGITIVE AIR ANALYSIS REPORT

1. Name of the Industry	: Rashmi Cement Ltd. (Steel & Power Division)
2. Address	: Jitusole, P.S. - Jhargram, P.O. - Garsalboni, Paschim Midnapore, Pin - 721507
3. Date of sampling	: 13.03.2017
4. Report No.	: 312/EC/M/TR(A)/V/16-17
5. Analysis completed on	: 17.03.2017
6. Reporting Date	: 21.03.2017

A) GENERAL INFORMATION

1. Location of Sampling	: Coal Shed
2. Duration of Sampling	: 08 hrs. (09:30 a.m. - 05:30 p.m.)

B) METEOROLOGICAL INFORMATION

1. Average Temperature (°C)	: 32.4
2. Average Relative Humidity (%)	: 78.0
3. Barometric Pressure (mm of Hg)	: 757.0
4. Smell or Odour	: No Remarkable Smell

C) RESULTS

SL. NO.	PARAMETERS	METHOD NO.	RESULTS
1.	Concentration of SPM ($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 4) & ASTM D 4096	461.69

Date : 21.03.2017

Authorised Signatory :



Dr. Ajoy Paul
(Scientist)



FUGITIVE AIR ANALYSIS REPORT

1.	Name of the Industry	:	Rashmi Cement Ltd. (Steel & Power Division)
2.	Address	:	Jitusole, P.S. - Jhargram, P.O. - Garsalboni, Paschim Midnapore, Pin - 721507
3.	Date of sampling	:	13.03.2017
4.	Report No.	:	312/EC/M/TR(A)/VI/16-17
5.	Analysis completed on	:	17.03.2017
6.	Reporting Date	:	21.03.2017

A) GENERAL INFORMATION

1.	Location of Sampling	:	Ferro Alloy Unit
2.	Duration of Sampling	:	08 hrs. (10:00 a.m. - 06:00 p.m.)

B) METEOROLOGICAL INFORMATION

1.	Average Temperature (°C)	:	32.4
2.	Average Relative Humidity (%)	:	78.0
3.	Barometric Pressure (mm of Hg)	:	757.0
4.	Smell or Odour	:	No Remarkable Smell

C) RESULTS

SL. NO.	PARAMETERS	METHOD NO.	RESULTS
1.	Concentration of SPM ($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 4) & ASTM D 4096	376.03

Date : 21.03.2017

Authorised Signatory :



Dr. Ajoy Paul
(Scientist)





WEST BENGAL POLLUTION CONTROL BOARD
HALDIA REGIONAL LABORATORY

Block 5, 40 flats complex, Privambada Housing Estate, P.O.-Khanjira-hak,
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 Cement Ltd. (Unit-3)		
2. Address	Jitsole, P.S.-Jhargam, Paschim Medinipur, Pin-721307		
3. Category & Type	Red/Sponge & Iron Unit		
4. Sampling Date	06/12/2016		
5. Duration of Sampling	30 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)	3.143		
9. Stack connected to	Rotary Kiln NO. 3, 4 & 5 (attached with a common stack)		
10. Emission due to (Furnace /Boiler)	Combustion of Coal & Reduction of Iron Ore		
11. Average operational hours of boiler/ furnace (per month)	720 hrs./month		
12. APC System(if any)	ESP		
13. Working load of source (MT/hr)	50 TPD (each)		
14. Fuel used	Coal		
15. Rated Fuel consumption (Kg or l/hr)	-		
16. Working Fuel consumption (Kg or l/hr)	Coal-3.0 TPH (each)		
17. Nature of Furnace /Boiler	-		
18. Flue gas Temp. (°C)	129.0		
19. Flue gas velocity	9.98 m/sec	20. Volume of Flue gas drawn in lit (m ³)	1.02
21. Corrected flue gas volume(Nm ³)	0.9926	22. Percentage CO ₂	10.2 %
23. To be compensated at (% if required)	At 12.0% CO ₂		
24. Initial wt of thimble (gm)	1.5137	25. Final wt of thimble (gm)	1.5388
26. Wt. of PM (mg)	25.0	27. Particulate matter (mg/Nm ³)	29.75 at 12% CO ₂
28. Barometric Pressure Head	757 mm of Hg.	29. Diameter of the nozzle	9.525 mm.
30. Others:- SO ₂ (mg/Nm ³)*	317.02	31. Thimble No.	GF-1003
32. Sampled by:	Sri S. Barua, EE, H.R.O.		

Done by M/s. Indicative Consultant India

Junior Scientist

Subhajit Ghosh 19/12/16
Scientist & In-Charge

- Copy to:
1. Chief Engineer, O & E, WBPCB.
 2. Sr. Environmental Engineer, Camac Street, WBPCB.
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WEST BENGAL POLLUTION CONTROL BOARD
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Analysis Report of Gaseous Emission

Analysis Done at Haldia Regional Laboratory :

1. Name of industry	M/s Rashmi Cement Ltd. (Unit-3)		
2. Address	Jitusole, P.S.-Jhargam, Paschim Medinipur, Pin-721507		
3. Category & Type	Red/Sponge & Iron Unit		
4. Sampling Date	06/12/2016		
5. Duration of Sampling	30 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)	2.5457		
9. Stack connected to	Rotary Kiln No.-1 & 2 (attached with a common stack)		
10. Emission due to(Furnace /Boiler)	Combustion of Coal & Reduction of Iron Ore		
11. Average operational hours of boiler/ furnace (per month)	720 hrs./month		
12. APC System(if any)	ESP		
13. Working load of source (MT/hr)	50 TPD (each)		
14. Fuel used	Coal		
15. Rated Fuel consumption (Kg or l/hr)	-		
16. Working Fuel consumption (Kg or l/hr)	Coal-3.20 TPH (each)		
17. Nature of Furnace /Boiler	-		
18. Flue gas Temp. (°C)	131.0		
19. Flue gas velocity	10.06 m/sec	20. Volume of Flue gas drawn in lit (m ³)	1.02
21. Corrected flue gas volume(Nm ³)	0.9893	22. Percentage CO ₂	9.8 %
23. To be compensated at (%. if required)	At 12.0% CO ₂		
24. Initial wt of thimble (gm)	1.4770	25. Final wt of thimble (gm)	1.5106
26. Wt. of PM (mg)	33.6	27. Particulate matter (mg/Nm ³)	41.39 at 12% CO ₂
28. Barometric Pressure Head	757 mm of Hg.	29. Diameter of the nozzle	9.525 mm
30. Others:- SO ₂ (mg/Nm ³)*	359.86	31. Thimble No.	GP-1008
32. Sampled by:	Sri S. Barua, EE, H.R.O.		

*Done by M/s. Indicative Consultant India

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Analysis Report of Gaseous Emission

Analysis Done at Haldia Regional Laboratory :

1. Name of Industry	M/s Rashmi Cement Ltd. (Unit-3)		
2. Address	Jitusole, P.S.-Jhargam, Paschim Medinipur. Pin-721 507		
3. Category & Type	Red/Sponge & Iron Unit		
4. Sampling Date	06/12/2016		
5. Duration of Sampling	28 min.		
6. Name of Laboratory	M/s. Indicative Consultant India		
7. Height of Stack from ground (m)	32.0		
8. Cross section of Stack at sampling point(m ²)	0.385		
9. Stack connected to	Cooler Discharge No.-3,4,5 & 6(attached with a common stack)		
10. Emission due to(Furnace /Boiler)	Process Activity		
11. Average operational hours of boiler/ furnace (per month)	720 hrs./month		
12. APC System(if any)	Bag Filter		
13. Working load of source (MT/hr)	-		
14. Fuel used	-		
15. Rated Fuel consumption (Kg or l/hr)	-		
16. Working Fuel consumption (Kg or l/hr)	-		
17. Nature of Furnace /Boiler	-		
18. Flue gas Temp. (°C)	34.0		
19. Flue gas velocity	8.01 m/sec	20. Volume of Flue gas drawn in lit (m ³)	1.008
21. Corrected flue gas volume(Nm ³)	0.9776	22. Percentage CO ₂	<0.2%
23. To be compensated at (%. if required)	-		
24. Initial wt of thimble (gm)	1.4599	25. Final wt of thimble (gm)	1.4609
26. Wt. of PM (mg)	1.0	27. Particulate matter (mg/Nm ³)	1.02
28. Barometric Pressure Head	757 mm of Hg.	29. Diameter of the nozzle	9.525 mm
30. Others:-		31. Thimble No.	GF-1009
32. Sampled by:	Sri S. Barua, EE, H.R.O.		

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Analysis Report of Gaseous Emission

Analysis Done at Haldia Regional Laboratory :

1. Name of Industry	M/s Rashmi Cement Ltd. (Unit-3)		
2. Address	Jitusole, P.S.-Jhargam, Paschim Medinipur, Pin-721507		
3. Category & Type	Red/Sponge & Iron Unit		
4. Sampling Date	06/12/2016		
5. Duration of Sampling	29 min.		
6. Name of Laboratory	M/s. Indicative Consultant India		
7. Height of Stack from ground (m)	30.0		
8. Cross section of Stack at sampling point(m ²)	0.1964		
9. Stack connected to	Cooler Discharge No.-2		
10. Emission due to(Furnace /Boiler)	Process Activity		
11. Average operational hours of boiler/ furnace (per month)	720 hrs./month		
12. APC System(if any)	Bag Filter		
13. Working load of source (MT/hr)	-		
14. Fuel used	-		
15. Rated Fuel consumption (Kg or l/hr)	-		
16. Working Fuel consumption (Kg or l/hr)	-		
17. Nature of Furnace /Boiler	-		
18. Flue gas Temp. (°C)	33.0		
19. Flue gas velocity	1.81 m/sec	20. Volume of Flue gas drawn in lit (m ³)	1.015
21. Corrected flue gas volume(Nm ³)	0.9844	22. Percentage CO ₂	<0.2 %
23. To be compensated at (% , if required)	-		
24. Initial wt of thimble (gm)	1.4730	25. Final wt of thimble (gm)	1.4738
26. Wt. of PM (mg)	0.8	27. Particulate matter (mg/Nm ³)	0.813
28. Barometric Pressure Head	757 mm of Hg.	29. Diameter of the nozzle	9.525 mm
30. Others:-			
31. Thimble No.	GF-1010		
32. Sampled by:	Sri S. Barua, EE, H.R.O.		

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Analysis Report of Gaseous Emission

Analysis Done at Haldia Regional Laboratory :

1. Name of Industry	M/s Rashmi Cement Ltd. (Unit-3)		
2. Address	Jitsole, P.S.-Jhargam, Paschim Medinipur, Pin-721507		
3. Category & Type	Red/Sponge & Iron Unit		
4. Sampling Date	06/12/2016		
5. Duration of Sampling	28 min.		
6. Name of Laboratory	M/s. Indicative Consultant India		
7. Height of Stack from ground (m)	30.0		
8. Cross section of Stack at sampling point (m ²)	0.1964		
9. Stack connected to	Cooler Discharge No.-1		
10. Emission due to (Furnace /Boiler)	Process Activity		
11. Average operational hours of boiler/ furnace (per month)	720 hrs./month		
12. APC System (if any)	Bag Filter		
13. Working load of source (MT/hr)	-		
14. Fuel used	-		
15. Rated Fuel consumption (Kg or l/hr)	-		
16. Working Fuel consumption (Kg or l/hr)	-		
17. Nature of Furnace /Boiler	-		
18. Flue gas Temp. (°C)	32.0		
19. Flue gas velocity	8.27 m/sec	20. Volume of Flue gas drawn in lit (m ³)	1.036
21. Corrected flue gas volume (Nm ³)	1.0081	22. Percentage CO ₂	<0.2 %
23. To be compensated at (% if required)	-		
24. Initial wt of thimble (gm)	1.4996	25. Final wt of thimble (gm)	1.5044
26. Wt. of PM (mg)	4.8	27. Particulate matter (mg/Nm ³)	4.76
28. Barometric Pressure Head	757 mm of Hg.	29. Diameter of the nozzle	9.525 mm
30. Others:-			
31. Thimble No.	GF-1021		
32. Sampled by:	Sri S. Barua, EE, H.R.O.		

Junior Scientist

Subjit Ghosh 19/12/16
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HALDIA REGIONAL LABORATORY

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Analysis Report of Gaseous Emission

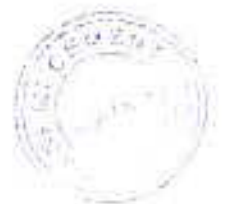
Analysis Done at Haldia Regional Laboratory :

1. Name of Industry	M/s Rashmi Cement Ltd. (Unit-3)		
2. Address	Jitusole, P.S.-Jhargam, Paschim Medinipur, Pin-721507		
3. Category & Type	Red/Sponge Iron Unit		
4. Sampling Date	09/12/2016		
5. Duration of Sampling	29 min.		
6. Name of Laboratory	M/s. Indicative Consultant India		
7. Height of Stack from ground (m)	32.0		
8. Cross section of Stack at sampling point(m ²)	0.385		
9. Stack connected to	Product House-02(New)		
10. Emission due to(Furnace/Boiler)	Process Activity		
11. Average operational hours of boiler/ furnace (per month)	720 hrs./month		
12. APC System(if any)	Bag Filter		
13. Working load of source (MT/hr)	-		
14. Fuel used	-		
15. Rated Fuel consumption (Kg or l/hr)	-		
16. Working Fuel consumption (Kg or l/hr)	-		
17. Nature of Furnace /Boiler	-		
18. Flue gas Temp. (°C)	35.0		
19. Flue gas velocity	7.73 m/sec	20. Volume of Flue gas drawn in lit (m ³)	1.015
21. Corrected flue gas volume(Nm ³)	0.9812	22. Percentage CO ₂	<0.2 %
-	-	-	-
24. Initial wt of thimble (gm)	1.4930	25. Final wt of thimble (gm)	1.5031
26. Wt. of PM (mg)	10.1	27. Particulate matter (mg/Nm ³)	10.29
28. Barometric Pressure Head	757 mm of Hg.	29. Diameter of the nozzle	9.525 mm
30. Others:-		31. Thimble No.	GF-1035
32. Sampled by:	Sri S. Barua, EE, H.R.O.		

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WEST BENGAL POLLUTION CONTROL BOARD
HALDIA REGIONAL LABORATORY

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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 Cement Ltd. (Unit-3)	
2. Address		Jitsole, P.S.-Jhargam, Paschim Medinipur, Pin-721507	
3. Category & Type		Red/Sponge Iron Unit	
4. Sampling Date		09/12/2016	
5. Duration of Sampling		26 min.	
6. Name of Laboratory		M/s. Indicative Consultant India	
7. Height of Stack from ground (m)		40.0	
8. Cross section of Stack at sampling point(m ²)		0.7857	
9. Stack connected to		Stock House	
10. Emission due to(Furnace/Boiler)		Process Activity	
11. Average operational hours of boiler/ furnace (per month)		720 hrs/month	
12. APC System(if any)		Bag Filter	
13. Working load of source (MT/hr)		-	
14. Fuel used		-	
15. Rated Fuel consumption (Kg or l/hr)		-	
16. Working Fuel consumption (Kg or l/hr)		-	
17. Nature of Furnace /Boiler		-	
18. Flue gas Temp. (°C)		34.0	
19. Flue gas velocity	8.57 m/sec	20. Volume of Flue gas drawn in lit (m ³)	1.014
21. Corrected flue gas volume(Nm ³)	0.9867	22. Percentage CO ₂	<0.2 %
24. Initial wt of thimble (gm)	1.4727	25. Final wt of thimble (gm)	1.4787
26. Wt. of PM (mg)	6.0	27. Particulate matter (mg/Nm ³)	6.08
28. Barometric Pressure Head	757 mm of Hg.	29. Diameter of the nozzle	9.525 mm
30. Others:-		31. Thimble No.	GF-1038
32. Sampled by:		Sri S. Barua, EE, H.R.O.	

Junior Scientist

Subhojit Choudhury 19/12/16
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WEST BENGAL POLLUTION CONTROL BOARD
HALDIA REGIONAL LABORATORY

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Analysis Report of Gaseous Emission

Analysis Done at Haldia Regional Laboratory :

1. Name of Industry	M/s Rashmi Cement Limited (Unit-3) Phase II		
2. Address	Jitusole, P.S- Jhargram, Paschim Medinipur, Pin-721507		
3. Category & Type	Red/ Sponge & Iron Unit		
4. Sampling Date	07/12/2016		
5. Duration of Sampling	35 min.		
6. Name of Laboratory	M/s. Indicative Consultant India		
7. Height of Stack from ground (m)	55.0		
8. Cross section of Stack at sampling point(m ²)	6.16		
9. Stack connected to	Rotary Kiln No. 11		
10. Emission due to(Furnace /Boiler)	Combustion of Coal & Reduction of Iron Ore.		
11. Average operational hours of boiler/ furnace (per month)	720 Hrs/month		
12. APC System(if any)	E.S.P.		
13. Working load of source (MT/hr)	150 TPD		
14. Fuel used	Coal		
15. Rated Fuel consumption (Kg or l/hr)	-		
16. Working Fuel consumption (Kg or l/hr)	Coal- 9.5 TPH		
17. Nature of Furnace /Boiler	-		
18. Flue gas Temp. (°C)	157.0		
19. Flue gas velocity	9.13 m/sec.	20. Volume of Flue gas drawn in lit (m ³)	1.015
21. Corrected flue gas volume(Nm ³)	0.9910	22. Percentage CO ₂	10.4%
23. To be compensated at (%. if required)	At 12% CO ₂		
24. Initial wt of thimble (gm)	1.5423	25. Final wt of thimble (gm)	1.5634
26. Wt. of PM (mg)	21.1	27. Particulate matter (µg/Nm ³)	24.57 at 12% CO ₂
28. Barometric Pressure Head	757 mm of Hg.	29. Diameter of the nozzle	9.525 mm
30. Others:- SO ₂ (mg/Nm ³)*	394.13	31. Thimble No.	GF-1023
32. Sampled by:	Sri S. Barua, EE, H.R.O.		

*Done by M/s. Indicative Consultant India

Junior Scientist

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WEST BENGAL POLLUTION CONTROL BOARD
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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 Cement Limited (Unit-3) Phase II		
2. Address	Jitsole, P.S- Jhargram, Paschim Medinipur, Pin-721507		
3. Category & Type	Red/ Sponge & Iron Unit		
4. Sampling Date	07/12/2016		
5. Duration of Sampling	28 min.		
6. Name of Laboratory	M/s. Indicative Consultant India		
7. Height of Stack from ground (m)	32.0		
8. Cross section of Stack at sampling point(m ²)	0.4420		
9. Stack connected to	Cooler Discharge No. 7,8,9&10 (attached with a common stack)		
10. Emission due to(Furnace /Boiler)	Process Activity		
11. Average operational hours of boiler/ furnace (per month)	720 Hrs/month		
12. APC System(if any)	Bag Filter		
13. Working load of source (MT/hr)	-		
14. Fuel used	-		
15. Rated Fuel consumption (Kg or l/hr)	-		
16. Working Fuel consumption (Kg or l/hr)	-		
17. Nature of Furnace /Boiler	-		
18. Flue gas Temp. (°C)	38.0		
19. Flue gas velocity	8.07 m/sec.	20. Volume of Flue gas drawn in m ³	1.008
21. Corrected flue gas volume(Nm ³)	0.9744	22. Percentage CO ₂	<0.2%
23. To be compensated at (% if required)	-		
24. Initial wt of thimble (gm)	1.4891	25. Final wt of thimble (gm)	1.5016
26. Wt. of PM (mg)	12.5	27. Particulate matter (mg/Nm ³)	12.83
28. Barometric Pressure Head	757 mm of Hg.	29. Diameter of the nozzle	9.523 mm
30. Others:-		31. Thimble No.	GF 1026
32. Sampled by:	Sri S. Barua, EE, H.R.O.		

Junior Scientist

Yubrajit Ghoshary 09/12/16
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Analysis Report of Gaseous Emission

Analysis Done at Haldia Regional Laboratory :

1. Name of Industry	M/s Rashmi Cement Limited (Unit-2) Phase II		
2. Address	Jitsole, P.S.-Jhargram, Paschim Medinipur, Pin-721507		
3. Category & Type	Red/ Sponge & Iron Unit		
4. Sampling Date	07/12/2016		
5. Duration of Sampling	28 min.		
6. Name of Laboratory	M/s. Indicative Consultant India		
7. Height of Stack from ground (m)	30.0		
8. Cross section of Stack at sampling point(m ²)	0.4420		
9. Stack connected to	I-Bin		
10. Emission due to(Furnace /Boiler)	Process Activity		
11. Average operational hours of boiler/ furnace (per month)	720 Hrs/month.		
12. APC System(if any)	Bag Filter		
13. Working load of source (MT/hr)	-		
14. Fuel used	-		
15. Rated Fuel consumption (Kg or l/hr)	-		
16. Working Fuel consumption (Kg or l/hr)	-		
17. Nature of Furnace /Boiler	-		
18. Flue gas Temp. (°C)	36.0		
19. Flue gas velocity	8.32 m/sec.	20. Volume of Flue gas drawn in lit (m ³)	1,036
21. Corrected flue gas volume(Nm ³)	0.9981	23. Percentage CO ₂	<0.2%
23. To be compensated at (%. if required)	-		
24. Initial wt of thimble (gm)	1.4960	25. Final wt of thimble (gm)	1.4967
26. Wt. of PM (mg)	0.7	27. Particulate matter (mg/Nm ³)	0.701
28. Barometric Pressure Head	757 mm of Hg.	29. Diameter of the nozzle	9.525 mm
30. Others:-		31. Thimble No.	GF-1027
32. Sampled by:	Sri S. Barua, EE, H.R.O.		

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Analysis Report of Gaseous Emission

Analysis Done at Haldia Regional Laboratory :

1. Name of Industry	M/s Rashmi Cement Limited (Unit-3) Phase II		
2. Address	Jitusole, P.S- Jhargram, Paschim Medinipur, Pin-721507		
3. Category & Type	Red/ Sponge & Iron Unit		
4. Sampling Date	07/12/2016		
5. Duration of Sampling	31 min.		
6. Name of Laboratory	M/s. Indicative Consultant India		
7. Height of Stack from ground (m)	30.0		
8. Cross section of Stack at sampling point(m ²)	0.2829		
9. Stack connected to	Product House		
10. Emission due to(Furnace /Boiler)	Process Activity		
11. Average operational hours of boiler/ furnace (per month)	720 Hrs/month		
12. APC System(if any)	Bag Filter		
13. Working load of source (MT/hr)	-		
14. Fuel used	-		
15. Rated Fuel consumption (Kg or l/hr)	-		
16. Working Fuel consumption (Kg or l/hr)	-		
17. Nature of Furnace /Boiler	-		
18. Flue gas Temp. (°C)	35.0		
19. Flue gas velocity	7.33 m/sec.	20. Volume of Flue gas drawn in lit (m ³)	1.023
21. Corrected flue gas volume(Nm ³)	0.9955	22. Percentage CO ₂	<0.2%
23. To be compensated at (% , if required)	-		
24. Initial wt of thimble (gm)	1.4563	25. Final wt of thimble (gm)	1.4572
26. Wt. of PM (mg)	0.9	27. Particulate matter (mg/Nm ³)	0.904
28. Barometric Pressure Head	757 mm of Hg.	29. Diameter of the nozzle	9.525 mm
30. Others:-		31. Thimble No.	GF-1028
32. Sampled by:-	Sri S. Barua, EE, H.R.O.		

Junior Scientist

Subhojit Ghosh 07/12/16
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)



EFFLUENT WATER ANALYSIS REPORT

1. Name of the Industry	: Rashmi Cement Ltd. (Steel & Power Division)
2. Address	: Jitusole, P.S. - Jhargram, P.O. - Garsalboni, Paschim Midnapore, Pin - 721507
3. Report No.	: Env/650/W/M(I)/16-17
4. Date of sampling	: 13.03.2017
5. Reporting date	: 21.03.2017
6. Type of sample	: Industrial Effluent Water (grab)
7. Collection & preservation of sample	: APHA 22 nd Edition, 1060
8. Location of sample	: Near Cooler Discharge
9. Sample collected in presence of	: Company Representative

PARAMETERS	TEST METHODS	RESULTS
1. pH	APHA 22 nd Edition, 4500-H•B	: 7.12
2. Total Suspended Solids (mg./l)	APHA 22 nd Edition, 2540 D	: 15.0
3. Oil and Grease (mg./l)	APHA 22 nd Edition, 5520 B/D	: <1.0
4. COD (mg./l)	APHA 22 nd Edition, 5220 B/C/D	: 20.0
5. BOD [3 days, 27°C] (mg./l)	APHA 22 nd Edition, 5210-B	: 3.0

Authorised Signatory :



Dr. Ajoy Paul
(Scientist)



EFFLUENT WATER ANALYSIS REPORT

1.	Name of the Industry	: Rashmi Cement Ltd. (Steel & Power Division)
2.	Address	: Jitusole, P.S. - Jhargram, P.O. - Garsalboni, Paschim Midnapore, Pin - 721507
3.	Report No.	: Env/650/W/M(ii)/16-17
4.	Date of sampling	: 13.03.2017
5.	Reporting date	: 21.03.2017
6.	Type of sample	: Industrial Effluent Water (grab)
7.	Collection & preservation of sample	: APHA 22 nd Edition, 1060
8.	Location of sample	: Near Ferro Alloy Plant Area
9.	Sample collected in presence of	: Company Representative

PARAMETERS	TEST METHODS	RESULTS
1. pH	APHA 22 nd Edition, 4500-H·B	: 6.92
2. Total Suspended Solids (mg./l)	APHA 22 nd Edition, 2540 D	: 35.0
3. Oil and Grease (mg./l)	APHA 22 nd Edition, 5520 B/D	: 3.50
4. COD (mg./l)	APHA 22 nd Edition, 5220 B/C/D	: 80.0
5. BOD [3 days, 27°C] (mg./l)	APHA 22 nd Edition, 5210-B	: 12.0

Authorised Signatory :



Dr. Ajoy Paul
 (Scientist)



20.	Zinc (as Zn) (mg./l)	:	0.13	5.0	15.0
21.	Sulphate (as SO ₄) (mg./l)	:	4.25	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)	:	120.0	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.

Authorised Signatory :



Dr. Ajoy Paul
 (Scientist)



20.	Zinc (as Zn) (mg./l)	:	0.11	5.0	15.0
21.	Sulphate (as SO ₄) (mg./l)	:	3.87	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)	:	148.0	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.

Authorised Signatory :



Dr. Ajoy Paul
 (Scientist)



LECHATE STUDY REPORT

1.	Name of the Industry	:	Rashmi Cement Ltd. (Steel & Power Division)
2.	Address	:	Jitusole, P.S. - Jhargram, P.O. - Garsalboni, Paschim Midnapore, Pin - 721507
3.	Date of sampling	:	13.03.2017
4.	Report No.	:	Env/652/L/M/16-17
5.	Reporting date	:	21.03.2017
6.	Type of Sample	:	Liquid Sample

Sl. No.	LOCATION	PARAMETERS (mg/kg.)						
		Fe	Zn	Cr	Cu	Ni	Pb	Cd
1.	Near DRI Plant (Jitusole)	510.0	35.0	<0.6	3.80	3.20	<2.0	<0.5
2.	Near Ferro Alloy Plant	350.0	20.5	<0.6	2.50	2.80	<2.0	<0.5

Authorised Signatory :



Dr. Ajoy Paul
(Scientist)



Serial No.	Action points for Integrated Iron & Steel Industry	Action Plan
1	Coke Oven Plants	
	A To meet the parameters PLD (% leaking colours), PLL (% leaking lids), PLO (% leaking off take), of the notified standards under EPA within three years by December 2005). Industry will submit time bound action plan and PER Chart along with the Bank Guarantee for the implementation of the time.	Not applicable
	B To rebuild at least 40% of the coke oven batteries in next 10 years (by December 2012).	Not applicable
2	Steel Melting Shop Fugitive emissions - To reduce 30% by March 2004 and 100% by March 2008 (including installation of secondary Dedusting facilities).	Not applicable
3	Blast Furnace Direct inject of reducing agents _____ by June 2013.	Not applicable
4	Solid Waste/Hazardous Waste Management	
	A Utilization of Steel/Melting shop (SMS)/Blast Furnace (BF) Slag as per the following schedule: <ul style="list-style-type: none"> • By 2004 - 70% • By 2006 - 80% and • By 2007 - 100% 	Not applicable
	Hazardous Wastes	
	B I Charge of tar sludge/ETP sludge to Coke Oven by June 2003.	Not Applicable
	II Inventorization of the Hazardous waste as per Hazardous Waste (M & H). Rules, 1989 as amended in 2000 and implementation of the Rules by Dec. 2003. (tar sludge, acid sludge, waste Lubricating oil and type fuel falls in the category of Hazardous waste).	Inventorization completed. Used oils and lubricants are sold to CPCB authorized vendors/parties
5	Water Conservation/Water Pollution	
	A To reduce specific water consumption to 5 m ³ /t for long products and 8 m ³ /t for flat products by December 2005.	As per water Cess submitted the average water consumption is within the prescribed limit
	B To operate the Co-BP effluent treatment plant efficiently to achieve the notified effluent discharge standards. - by June 2003.	Not Applicable
6	Installation of Continuous stacks monitoring system & its calibration in major	We have successfully installed 04 no of online Stack



Status of Charter on Corporate Responsibility for Environment protection (CREP) **RASHMI**
GROUP

	stacks and setting up of the online ambient air quality monitoring stations by June 2005.	monitoring system in DRI plant. In house Ambient Monitoring System is installed for monitoring the ambient air quality.
7	To operate the existing pollution control equipment efficiently and to keep proper record of run hours, failure time and efficiency with immediate effect. Compliance report in this regard is submitted to CPCB/SPCB every three months.	Compliance reported is being submitted to the WBPCB and quarterly monitoring of the stacks is being done by WBPCB.
8	To implement the recommendations of Life Cycle Assessment (LCA) study sponsored by MoEF by December 2003.	This project got EC on 2009 and is still under implementation
9	The industry will initiate the steps to adopt the following clean technologies measures to improve the performance of industry towards production, energy land environment.	
	A Energy recovery of top Blast Furnace (BF) gas.	Not applicable
	B Use of Tar - free runner linings	Not applicable
	C De- dusting of Cast house at tap holes, runners, skimmers ladle and charging points.	
	D Suppression of fugitive emissions using nitrogen gas or other inert gas.	Not Applicable
	E To study the possibility of slag and fly ash transportation back to the abandoned mines, to the abandoned mines, to fill up the cavities through empty railway wagons while they return back to the mines and its implementation.	The slag that is being generated is used for road making and land filling. The fly ash that is being generated is used in the sister plant Rashmi Cement Limited. The company already acquired the abandoned Murum Khadan for disposal of the tailings and slurry
	F Processing of the waste containing flux & ferrous wastes through waste recycling plant.	A modern State of Art of Technology of Sinter Plant has been installed for recycling of waste materials. Maximum Generated Solid wastes are reused in different units such as coal fine used in Pellet plant, iron ore fine in pellet and sinter, Dolochar used in AFBC Boiler for Power Generation



		Kharagpur. Fly ash is used in own plant RCL Cement Division.
G	To implement rainwater harvesting	RCL have sufficient capacity rain water harvesting ponds in plant premises and harvested water are being used in daily process as well as housekeeping purpose.
H	Reduction Green House Gases by:	
	I Reduction in power consumption	----
	II Use of by- products gases for power generation	The waste gas generated from DRI is being utilised in the power generation passing through Waste heat Recovery Boiler (WHRB) feeding to 11 nos. water tube boiler which generates 28 MW power.
	III Promotion of Energy Optimisation technology Including energy/audit	
I	To set targets for Resource Conservation such as Raw material, energy and water consumption to match International Standards.	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 physical treatment in the same unit
J	Up- gradation in the monitoring and analysis facilities for air and water pollution. Also to impart elaborate training to the manpower so that realistic data is obtained in the environmental monitoring laboratories.	A separate Environment Management Cell is already in operational to manage all the environmental issues. A laboratory has been setup for monitoring and analysis of air and water pollution parameters. The manpower entrusted for environmental monitoring has been imparted training on regular basis.
K	To Improve overall housekeeping.	To improve the house keeping, dedicated team of workers, machinery are deployed for regular cleaning of spillage. Cleaning and maintenance of garland drains & storm water drains at regular interval. Apart from this high vacuum road sweeper are used for



Status of Charter on Corporate Responsibility for Environment protection (CREP) **RASHMI**
GROUP

		continuous cleaning of internal road.
10	<p>Sponge Iron Plants Inventorization of sponge iron plants to be completed by SPCBs/CPCE by June 2003 and units will be asked to install proper air pollution control equipment by December 2003 to control primary and secondary emissions. As per rebuilding schedule submitted to CPCB/MoEF.</p>	3 FIELD ESP, I.D. FAN, and WHRB are being installed in order to keep the pollution emission within prescribed limit.



Envirotech East Pvt. Limited

An ISO 9001:2008, 14001:2004 & OHSAS:18001:2007 Company
Laboratory Recognised by West Bengal Pollution Control board

Bengal Ambuja Commercial Complex,

UN-F 13, 1050/1, Survey Park, Kolkata - 700 075

☎ - 2418 8127/8128/8601; Fax - 2418 8128; email: eeplkol@gmail.com,

Web : www.envirotecheast.com

No. 2016/EEPL/MON/FERO/211

22.08.2016

SLAG ANALYSIS REPORT (TCLP EXTRACTION)

Name of the client	M/s Rashmi Cement Limited (Steel & Power Dvn.)
Address (as written on the sample packet)	Jitushol, Jhargram, Dist. Paschim Midnapur, W.B.
Date of Sampling (as written on the sample packet)	20.07.2016
Sample-type (as written on the sample packet)	Silico Manganese Slag
Sample supplied by	M/s Rashmi Cement Limited (Steel & Power Dvn.)

Sl. No.	Parameter	Unit	Result
1	Calcium (as Ca)	mg/l	BDL
2	Magnesium (as Mg)	mg/l	BDL
3	Aluminium (as Al)	mg/l	BDL
4	Silica (as SiO ₂)	mg/l	BDL
5	Manganese (as Mn)	mg/l	UII
6	Iron (as Fe)	mg/l	BDL

☞ BDL - Below Detectable Limit ;

☞ TCLP extraction has been done & the extract analysed for above parameters.

Note: Contents of this report are meant for your guidance and should not be used for Advertisement, Evidence or Litigation

for ENVIROTECH EAST (P) LTD.




SUMMARY RECORD OF THE TWELFTH (12th) MEETING OF EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006 HELD ON 27th - 28th OCTOBER, 2016.

The Twelfth meeting of the Expert Appraisal Committee (EAC) for Industry-I Sector in terms of the provisions of the EIA Notification, 2006 for Environmental Appraisal of Industry-I Sector Projects was held on 27th-28th October, 2016 in the Ministry of Environment, Forest and Climate Change. Representative from Central Pulp and Paper Research Institute, Member of EAC has expressed his inability to attend the meeting due to prior engagements. The list of participants is annexed.

After welcoming the Committee members, discussion on each of the agenda items was taken up ad-seriatim.

Confirmation of the minutes of the 11th Meeting

The minutes of the 11th meeting, as circulated were confirmed subject to following modifications:

- 12.7.5 Expansion of Sponge Iron Plant (3, 00, 000 TPA to 6, 00, 000 TPA) and Ferro Alloy Plant (72, 000 TPA) by M/s Rashmi Cement Ltd, locate at Village Jitusole (J.L No 702 & 703, Jitusole Junglokhas J.L. No. 731 and Baghmudi J.L No. 928), District Paschim Medinipur, West Bengal. [J-11011/604/2008-IA.II(D)]

The proposal was considered in the 10th meeting of EAC (Industry-I) held on 29th - 31st August, 2016. Based on the presentation made and discussions held, the Committee asked the proponent to prepare EIA and EMP report to substantiate their claim that there is no increase in pollution load. The EIA and EMP report so prepared will be further considered by the Committee. Under Section 7 (ii) of EIA Notification as it is a case of change in product mix with no increase in pollution load.

PP has presented scenario in which he has explained the existing pollution load due to Ferro Alloy Plant (FeMn, FeSi, SiMn) vis-a-vis the anticipated pollution load due to change in product mix after add on /inclusion of Ferro Chrome (FeCr).

PP explained that the process for all the activities will remain the same as submerged arc furnace and the plant configuration will also remain the same. The water requirement and the waste water generated will also remain same. The release of pollutants on any hazardous, toxic or noxious substances in the air was presented before the committee and there is no abrupt change in the values of the pollutants emitting into the atmosphere. The PP explained that they have provided sufficient air pollution control equipments to meet the requirement.

Based on the presentation made and discussions held, the Committee recommended the project for environment clearance subject to stipulation of the following specific conditions and any other mitigative measures, as prescribed by the Ministry for environmental protection:

- i. The project proponent should install 24x7 air monitoring devices to monitor air emission and submit report to Ministry and its Regional Office.
- ii. All conditions stipulated in the earlier ECs granted to the project should be strictly adhered to.
- iii. TCLP test should be conducted for the Ferro-Chrome slag and report should be submitted along with the 6 monthly compliance report.





NOISE LEVEL SYUDY (AMBIENT)

1. Name of Industry : Rashmi Cement Limited (Steel & Power Division)
2. Address : Jitusole, Jhargram, Paschim Mednipur
3. Date of Study : 13/03/17
4. Height from Ground Level : 4 ft
5. Location : Near Plant Main Gate

Time	Value db (A)		
	Max	Min	Leq
10.00AM - 10.20AM	69.9	60.1	63.28

[Handwritten Signature]

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), Durgam (+91 9830067045)





ENVIROCHECK

House of Environmental Pollution Monitoring and Analysis

WBPCB & OSPCB Recognized, ISO 9001:2008, ISO 14001:2004 & OHSAS 18001:2007 Certified Laboratory



NOISE LEVEL SYUDY (AMBIENT)

1. Name of Industry : Rashmi Cement Limited (Steel & Power Division)
2. Address : Jitusole, Jhargram, Paschim Mednipur
3. Date of Study : 13/03/17
4. Height from Ground Level : 4 ft
5. Location : Guest House

Time	Value db (A)		
	Max	Min	Leq
10.30AM - 10.50AM	63.4	55.3	58.10



Authorized Signatory & Stamp

H.O. : 63/B, Rastraguru Avenue, Kolkata - 700028 Phone No. 033-2579 2891, 2549 7490, Fax No. 033-2529 0141

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 0674155172), Siliguri (+91 9830067048), Haldua (+91 9830067045), Dhanbad (+91 9830067045)





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NOISE LEVEL STUDY (SOURCE / AMBIENT)

1. Name of Industry : Rashmi Cement Limited (Steel & Power Division)
2. Address : Jitusole, Jhargram, Paschim Mednipur
3. Date of Study : 13/03/17
4. Height from Ground Level : 4 ft
5. Location : Jitusole (Village) - 4 km from Plant

Time	Value db (A)		
	Max	Min	Leq
11.00AM - 11.20AM	60.8	54.9	56.12




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

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Branch Office : Durgapur (+91 9674155172), Siliguri (+91 9830067046), Haldia (+91 9830067045), Dhanbad (+91 9830067045)





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NOISE LEVEL SYUDY (AMBIENT)

1. Name of Industry : Rashmi Cement Limited (Steel & Power Division)
2. Address : Jitusole, Jhargram, Paschim Mednipur
3. Date of Study : 13/03/17
4. Height from Ground Level : 4 ft
5. Location : Ferro Alloy Plant Area

Time	Value db (A)		
	Max	Min	Leq
11.30AM - 11.50AM	64.2	61.5	63.26



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

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NOISE LEVEL SYUDY (SOURCE)

1. Name of Industry : Rashmi Cement Limited (Steel & Power Division)
2. Address : Jitusole, Jhargram, Paschim Mednipur
3. Date of Study : 13/03/17 - 14/03/17 (24hrs)
4. Height from Ground Level : 4 ft
5. Location : 6 x 100 TPD DRI + 01 x 350 TPD DRI Section

Time	Value db (A)		
	Max	Min	Leq
06.00AM - 07.00AM	61.5	65.2	64.18
07.00AM - 08.00AM	62.5	67.8	66.23
08.00AM - 09.00AM	63.5	68.2	65.12
09.00AM - 10.00AM	62.8	68.5	66.28
10.00AM - 11.00AM	63.2	69.5	67.16
11.00AM - 12.00PM	64.8	68.4	67.10
12.00PM - 01.00PM	63.2	67.5	65.18
01.00PM - 02.00PM	62.8	68.2	65.23
02.00PM - 03.00PM	63.5	67.6	65.12
03.00PM - 04.00PM	64.2	71.5	68.23
04.00PM - 05.00PM	66.2	70.2	67.28
05.00PM - 06.00PM	65.3	67.5	66.10
06.00PM - 07.00PM	64.2	66.8	65.16
07.00PM - 08.00PM	63.8	68.5	66.18
08.00PM - 09.00PM	67.2	67.5	66.20
09.00PM - 10.00PM	65.2	67.8	66.18
10.00PM - 11.00PM	64.2	62.5	63.22
11.00PM - 12.00AM	62.5	64.8	63.20
12.00AM - 01.00AM	63.8	67.5	65.18
01.00AM - 02.00AM	62.7	66.8	65.10
02.00AM - 03.00AM	63.2	67.5	65.18
03.00AM - 04.00AM	62.1	68.3	67.28
04.00AM - 05.00AM	64.2	68.5	66.26
05.00AM - 06.00AM	62.8	67.5	65.38
Average Leq :			65.73



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

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ENVIROCHECK

House of Environmental Pollution Monitoring and Analysis

WBPCB & GSPCB Recognized, ISO 9001:2008, ISO 14031:2004 & OHSAS 18001:2007 Certified Laboratory



NOISE LEVEL SYUDY (SOURCE)

1. Name of Industry : Rashmi Cement Limited (Steel & Power Division)
2. Address : Jitusole, Jhargram, Paschim Mednipur
3. Date of Study : 13/03/17 - 14/03/17 (24hrs)
4. Height from Ground Level : 4 ft
5. Location : Captive Power Plant Generation Unit

Time	Value db (A)		
	Max	Min	Leq
06.00AM - 07.00AM	67.2	73.5	72.60
07.00AM - 08.00AM	68.2	73.1	71.65
08.00AM - 09.00AM	67.2	732.8	70.12
09.00AM - 10.00AM	68.5	74.1	72.68
10.00AM - 11.00AM	69.2	73.6	72.80
11.00AM - 12.00PM	68.5	73.2	72.16
12.00PM - 01.00PM	69.2	74.1	72.89
01.00PM - 02.00PM	68.5	71.5	69.12
02.00PM - 03.00PM	67.2	69.2	68.16
03.00PM - 04.00PM	68.5	72.5	70.10
04.00PM - 05.00PM	67.2	72.5	70.38
05.00PM - 06.00PM	68.1	73.2	71.68
06.00PM - 07.00PM	67.2	71.5	70.28
07.00PM - 08.00PM	66.2	68.5	67.23
08.00PM - 09.00PM	65.2	72.5	70.12
09.00PM - 10.00PM	66.2	73.5	72.80
10.00PM - 11.00PM	63.5	71.2	68.52
11.00PM - 12.00AM	65.2	71.8	69.21
12.00AM - 01.00AM	66.2	71.2	68.62
01.00AM - 02.00AM	65.2	68.2	67.62
02.00AM - 03.00AM	62.5	68.2	66.7
03.00AM - 04.00AM	61.2	67.5	66.18
04.00AM - 05.00AM	62.5	71.2	68.26
05.00AM - 06.00AM	63.1	67.5	66.12
Average Leq :			69.83



Authorized Signatory & Stamp

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