

Ramco Industries Limited



Dewanmaro Ayma
P.O.-Hariatara,
P.S.-Kharagpur (L)
Dt. Paschim Medinipur
West Bengal, Pin-721304
Ph. : 03222 - 201700
201772, 201773
Email : deb@ril.co.in

Date: 24/10/2017

To,
Director (S),
Government of India,
Ministry of Environment & Forests,
Eastern Region,
A/3, Chandrasekharapur,
Bhubaneswar-751023.



Sub: Six Month Compliance Report

Dear Sir,

We are submitting our six-month compliance report from April-17 to September-2017 duly complied with.

Kindly acknowledge the same.

Thanking you,

Yours faithfully,

For Ramco Industries Ltd.

Abhijit Bandyopadhyay
Abhijit Bandyopadhyay (Works)
Abhijit Bandyopadhyay
(Dy. General Manager-W)



Encl:

- 1) Compliance Report
- 2) Fibre Concentration report
- 3) Ambient Air & Fugitive emission monitoring report
- 4) Stack Analysis Reports

Note: For Publishing in website

For any suggestion/clarification/information sought by any public, should be contact Mr. Abhijit Bandyopadhyay, DGM at mobile No-08945525257 during office hours on any working day.

CC: Environmental Engineer, HRO, Haldia, Purba Medinipur.

COMPLIANCE STATUS OF Ministry of Environment and Forests

Letter No J-11011/22/2011-IA II (I), Dated 10th May, 2013

CONDITIONS	COMPLIANCE STATUS
A. Specific conditions:	
i. The project proponent shall adhere to the prescribed BIS standards and laws regarding use of asbestos, safety of employees etc. Raw Materials like asbestos fibre and cement should be transported in closed containers. Asbestos fibre should be brought in palletized form, in impermeable bags and under compressed condition	We strictly adhere to the prescribed BIS standards and law regarding use and handling of asbestos safety of employee etc. Raw materials like asbestos fiber and cement are always transported in closed containers. Asbestos fiber always brought in palletized form in impermeable bags and under compress condition.
ii. Only Chrysotile white asbestos fibre shall be used. Blue asbestos should not be utilized as a raw material in the manufacturing process.	We use only WHITE CHRYSOTILE Fibre as raw material in the manufacturing process and we do not use blue asbestos.
iii. There should be no manual handling/opening of asbestos fibre bags. The company should install fully automatic asbestos fibre debagging system	There is no manual handling/opening of asbestos fibre bags. Fibre is stored in polythene woven bags and unloaded in the automatic bag-opening device (BOD) wherein the bags are automatically shredded. Thus, no manual handling comes into picture due to installation of fully automatic asbestos fibre debagging system.
iv. Fugitive emission shall be controlled by bringing cement in closed tankers, flyash in covered trucks and asbestos in impervious bags inside a closed mixer. Dust collectors shall be provided to fibre mill, Bag opening device (BOD), cement and flyash silos to control emissions. Bag filters followed by wet washer shall be provided at automatic bag opening machine, bag shredder, fibre mill and to cement silo to collect the dust and recycle it into the process. Fugitive emissions generated from hopper of Jaw crusher and pulverizer shall be channelized through hood with proper suction arrangement, bag filter and stack.	Fly ash received in bulk tankers are conveyed pneumatically to the respective silos and there are no fugitive emissions. Bag filters followed by wet washer are provided at automatic bag opening machine bag shredder and fiber mill, Cement, Fly ash silos and rejected sheets pulverizer to collect the dust and recycle into the process. Asbestos fibre count is being monitored at pulverizer area found within the permissible limit. Fugitive emission results at: 1. Pulverizer area- 0.088 f/cc 2. BOD- 0.052 f/cc

v. The company shall comply with total dust emission limit of 2mg/Nm³ as notified under the Environment (protection) Act, 1986. Adequate measure should be adopted to control the process emission and ensure that the stack emission of asbestos fibre should not exceed the emission limit 0.2f/cc. asbestos fibre in work zone environment shall be maintained within 0.1 fibre/cc.	We are complying with total dust emission limit of 2mg/Nm³ as notification under the Environment (Protection) Act, 1986. Adequate measures have been adopted to control the process emission. We ensure that the stack emission of asbestos fiber will not exceed the emission limit of 0.2 fiber/cc. Asbestos fiber in work zone environment is maintained with in 0.1fiber/cc. Reports are enclosed herewith.
vi. Bag containing asbestos fibre shall be stored in enclosed area to avoid fugitive emissions of asbestos fibre from damaged bags, if any.	Bags containing asbestos fiber are stored in enclosed place to avoid fugitive emissions of asbestos fiber from damaged bags.
vii. Proper housekeeping shall be maintained within the plant premises. Process machinery, exhaust and ventilation shall e laid in accordance with Factories Act. Better housekeeping practices shall be adopted for improvement of the environment within the work environment also. These includes: - All monitoring transfer points shall be connected to dust extraction system. - Leakage or dust from machines and ducts shall be plugged. - Floor shall be cleaned by vacuum cleaner only. - Enclosed belt conveyer shall be used instead of manual transportation of asbestos within the premises.	Proper housekeeping maintained within the plant premises, process and machinery. Exhaust ventilation system is installed in accordance with factories Act. For better housekeeping, following practices are adopted for improvement of the environment within the work environment. - Wet mopping being done in shop floor. - Vacuum cleaning done at BOD & ER mill are. - Wet waste is collected in clarifier and recycled in the process. - Process water is collected in two Cone tank and recycled in the process. - Broken sheets are collected and pulverized & reused in the process. a) 1) BOD & ER Mill-dust collector with bag filters & wet scrubber attached and also fibre count is being monitored. Asbestos fibre count-0.052 f/cc

	2) Slurry mixer to storage tank- Connected to dust collector and also fibre count is being monitored. Asbestos count- 0.048 f/cc b) During monitoring of fugitive dust on 30.05.17 in BOD & Slurry mixer area there was no leakage observed and found all ducts are in good condition. c) We are cleaning the shop floor with the help of Vacuum Cleaner (Capacity-1800 LPM). d) Asbestos fibre is being transported from fibre godown through Forklift & through roller conveyor fibre bag are fed into the BOD.																		
viii. Quarterly monitoring of pollutant (PM₁₀, asbestos fibre count) in the work zone area and stack(s) shall be undertaken by the project proponents. In addition, asbestos fibre count including the fugitive dust in the work zone area shall be monitored by an independent monitoring agency like NIOH/ITRC/NCB or any other approved agency on six monthly basis and reports shall be submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.	Monitoring of Asbestos fibre count at work place is being done monthly at 9 locations by us & found well within the norms. Half yearly monitoring of asbestos fibre count in work zone (including Fugitive dust) is being monitored by external agency, M/s J. R. Lab, Hyderabad. Results are: <table border="1"> <thead> <tr> <th>Workplace</th><th>F/cc</th></tr> </thead> <tbody> <tr> <td>Fibre godown</td><td>0.024</td></tr> <tr> <td>BOD & ER mill</td><td>0.052</td></tr> <tr> <td>Slurry mixer</td><td>0.048</td></tr> <tr> <td>SF Drum-Cutter off</td><td>0.020</td></tr> <tr> <td>Stripping</td><td>0.040</td></tr> <tr> <td>Moulding</td><td>0.056</td></tr> <tr> <td>Salvaging Section</td><td>0.044</td></tr> <tr> <td>Pulverizer</td><td>0.088</td></tr> </tbody> </table>	Workplace	F/cc	Fibre godown	0.024	BOD & ER mill	0.052	Slurry mixer	0.048	SF Drum-Cutter off	0.020	Stripping	0.040	Moulding	0.056	Salvaging Section	0.044	Pulverizer	0.088
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	<table><tr><td>QC Lab</td><td>0.096</td></tr></table> Fugitavie dust results at Cement godown & Cement & Flyash mixing area are attached herewith. Also fibre dust & fibre count are being monitored in our fibre stack by M/s Indicative Consultant & by JR Lab. Results are: Fibre conscentration-0.168 f/cc Total Dust- 1.30 mg/Nm³. The reports are being submitted to State Pollution Control Board & Ministry once in 6 months.	QC Lab	0.096							
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ix. As reflected in the Environmental Management Plan, all the treated effluent shall be recycle and reused in the manufacturing process. No process water shall be discharged outside the premises and ‘zero’ discharge shall be maintained. All the domestic waste water shall be treated in septic tank followed by soak pit and used for green belt development.	The entire process water is recycled and reused in the manufacturing process. There are no process water discharged outside the premises and we are maintaining ZERO discharge. The domestic waste water is treated in septic tank followed by soak pit and used for green belt development.									
x. The Company shall ensure that the entire solid waste generated including process rejects, cement, flyash, dust from bag filters and empty asbestos bag shall be recycled back in the manufacturing process. There will be no solid waste disposal outside the plant premises. Asbestos fibres which cannot be further recycled due to contamination of iron dust shall be stored in HDPE lined secured landfill. The disposal facilities for asbestos waste shall be in accordance with the Bureau of Indian Standard Code.	We ensure that the entire solid waste generated including process rejects, dust from bag filters and empty asbestos bags are recycled the manufacturing process. <table><tr><td>Waste type</td><td>Qty.</td><td>Remarks</td></tr><tr><td>Broken AC Sheets</td><td>42 MT/m onth</td><td>Reused in the process</td></tr><tr><td>Dust From dust collectors</td><td>0.71 MT/m onth</td><td>Reused in the process</td></tr></table>	Waste type	Qty.	Remarks	Broken AC Sheets	42 MT/m onth	Reused in the process	Dust From dust collectors	0.71 MT/m onth	Reused in the process
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Broken AC Sheets	42 MT/m onth	Reused in the process								
Dust From dust collectors	0.71 MT/m onth	Reused in the process								
xi. The cut and damaged fibre bags shall be repaired immediately. Empty fibre bags will be shredded into fine particles in a bag shredder and recycled into the process. Piling of AC sheets shall be done in wet condition only.	The cut and damaged fibre bags if any found are being repaired immediately by fixing the adhesive tape. Empty fiber bags are shredded into fine particles in a bag shredder and recycled into the process.									

xii.	The Company shall obtain a certificate from the supplier of Chrysotile fibre that it does not any toxic or trace metals. A copy of certificate shall be submitted to the Ministry of Environment and Forest.	There is no toxic or trace elements found in the fibre supply. Also we have attached reports from the Fibre suppliers for your reference.
xiii.	Regular medical examination of the workers and health monitoring of all the employees shall be carried out and if cases of asbestosis are detected, necessary compensation shall be arranged under the existing laws. A competent occupational health physician shall be appointed to carry out medical surveillance. Occupational health of all the workers shall be monitored for lung function test, chest X- ray, sputum for acid-fast-bacilli (AFC) and asbestos body (AB), urine for sugar and albumen, blood tests for TLC, DLC, ESR, Hb and records maintained for at least 40 years from the beginning of the employment or 15 years after the retirement or cessation of employment whichever is later. Occupational Health Surveillance shall be carried out as per directives of the Hon'ble Supreme Court including the including the recent Kalyaneswari case.	Regular medical examination of the workers and health monitoring of all the employees are carried out. We will maintain record upto minimum 15 years after retirement or cessation of employment whichever is lower. A competent occupational health physician will be appointed to carry out surveillance. The occupational health monitoring is being done as stipulated. We have provided medical and health care facilities at the work place and carry out health surveillance as per the directives of the supreme court.
xiv.	To educate the workers, all the work places where asbestos dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.	We educate the workers, all the work places where asbestos dust may cause a hazard is clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.
xv.	The company shall also undertake rain water harvesting measures and plan of action shall be submitted to the Ministry's Regional Office at Bhubaneswar within three months.	We have a rain water harvesting pond to store the rain water and reuse.
xvi.	All the commitments made to the public during Public Hearing/Public Consultation meeting held on 5 th October, 2012 shall be satisfactorily implemented and a separate budget for implementing the same should be allocated & information submitted to the Ministry's Regional Office at Bhubaneswar.	Recommendations made during public hearing are being done from time to time.
xvii.	Green belt shall be developed in at least 33% of plant area as per the CPCB guidelines in consultation with the DFO. More focus shall be	An effective green belt is being developed with local species in consultation with DFO as per CPCB

	given towards the South East side of the plant layout.	guidelines, Efforts are further made to develop green belt in south eastern side.
cviii.	At least 5% of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared & submitted to Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.	We have done C.S.R activities in the past and as per budget we will continue to do more C.S.R activities. CSR budget- 1 lakh. This amount will be spent on various activities like 1) Fund towards Blood donation camp. 2) Fund towards Ambulance purchase. 3) Construction for School building, etc.
xix.	The company shall provide housing for construction labour within the site with all necessary infrastructure & 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 structure to be removed after the completion of the project.	We have provided all necessary infrastructure and facilities to our labour working in the site.
B. General Conditions:		
i.	The project authorities must strictly adhere to the stipulations made by the West Bengal Pollution Control Board & the State Government.	We strictly adhere to the stipulations made by the West Bengal Pollution Control Board and the State Government.
ii.	No further expansion/modification in the plant should be carried out without prior approval of the Ministry Of Environment and Forest.	No further expansion/ modifications in the plant will be carried out without prior approval of the Ministry of Environment and Forests.
iii.	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentrations of PM10, SO2 & NOx are anticipated in consultation with the CPCB. Data on ambient air quality & stack emission shall be regularly submitted to this Ministry including its Regional Office at Bhubaneswar & the SPCB/CPCB in six months.	We are monitoring ambient air quality in three locations of the plant by external agency. Next time we have to monitor in four locations. We are also sending those monitored results to MOEF, Bhubaneswar and State pollution control board. We have attached herewith the Ambient Air Quality Record done by M/s Indicative Consultant India.
iv.	Industrial waste water shall be properly collected, treated so as to conform to the	All our process water is 100% reused in our manufacturing process.

	standard prescribed under GSR 422 (E) dated 19 th May, 1993 & 31 st December, 1993 or as amended from time to time. The treated waste water shall be utilized for plantation purpose.	
v.	The overall noise levels in and around the plant area shall be kept well within the standard (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 (day time) & 70 dBA (night time).	Noise levels in and around the Plant area are monitored regularly and is well under the limit.
vi.	Occupational health surveillance of the workers shall be done on a regular basis & records maintained as per the Factories Act.	Regular medical examination of the workers and health monitoring of all the employees are carried out by a competent occupational health physician. The occupational health monitoring is being done as per factories act.
vii.	The company shall develop rain water harvesting structure to harvest the rain water for utilization in the lean season besides recharging the ground water.	Rain water harvesting pond has been developed to augment ground water during rainy season.
viii.	The project proponent shall also comply with all the environmental protection measures & 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 & health care etc.	We are complying with safe guards recommended in the EIA/EMP report. Also we are regularly doing C.S.R activities.
ix.	Requisite funds shall be earmarked towards capital cost & recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment & Forests 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 Bhubaneswar. The funds so provided shall not be diverted for any other purpose.	Environmental Expenses details are Recurring Expenses :- April, 2017 to September, 2017- Rs-57171/-. 1) Garden Maintenance & Plantation- Rs-8211/- 2) Personal Protective equipment, like Nose mask, hand gloves, Gum boot, etc- Rs-48960/-.
x.	A copy of clearance letter shall be sent by the	Copy of EC accorded has been sent to

	proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body & the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	local panchayat & Zila parishad. We have uploaded our EC in our company website.
xi.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website & shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF at Bhubaneswar. The respective Zonal office of CPCB & the SPCB. The criteria pollutant levels namely; PM ₁₀ , SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectorial parameters, indicated for the projects shall be monitored & displayed at a convenient location near the main gate of the company in the public domain.	We have uploaded the six monthly compliance reports in our company website. We are regularly sending six monthly compliance reports to MOEF regional office every 6 months. We have also made available relevant critical parameters in display board near the main gate.
xii.	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 MoEF, the respective Zonal Office of CPCB & the SPCB. The Regional Office of this Ministry at Bhubaneswar/CPCB/SPCB shall monitor the stipulated conditions.	The monitoring data has already been sent to the office along with the compliance report for the period October-16 to March-17 in the month of May, 2017.
xiii.	The environmental statement for each financial year ending 31 st 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 & shall also be sent to the respective Regional Office of the MoEF at Bhubaneswar by e-mail.	We are regularly sending the Environmental statement (Form-V, year ending Mar'31 st) to state pollution control board. Also uploaded this in our website.
xiv.	The project proponent shall inform the public that the project has been accorded environmental clearance by the ministry & copies of the clearance letter are available with the SPCB & may also be seen at website of the Ministry of Environment & Forests at	We have informed the public through the local newspaper announcement that the project has been accorded environmental clearance by the ministry and copies of the clearance are available with state pollution

	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 to the Regional Office at Bhubaneswar.	control board/committee and may also see at website of the MoEF at http://envfor.nic.in.
xv.	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure & final approval of the project by the concerned authorities & the date of commencing the land development work.	Information with date of financial closure and final approval given are informed to Ministry of Environment and Forest. Date of Financial closure-07.11.2012. Date of Final approval-03.08.2013.

12.06.2017

REPORT ON RESPIRABLE ASBESTOS FIBRE DUST CONCENTRATION

Project

M/s. RAMCO INDUSTRIES Ltd.,
DEWANMARA AYMA, HARIATARA, KHARAGPUR
PASCHIM MEDINIPUR, WEST BENGAL

Sampler used

Samples collected by JR Labs
using Envirotech - I,
SKC 224-PCXR8.1 &
Casella T13180 - I

Flow rate

1.0 L P M

Sampling Duration

60 minutes each

Specifications

As per AIA - RTM I
(IS : 11450) Membrane
Filter Method

Analyzed under :

Olympus make, Japan,
BX 40 Phase Contrast
Microscope

PERMISSIBLE EXPOSURE LIMIT VALUE (PELV)

AS PER MOEF & P C B = 0.1 fibre per cc of air.

Sl. No.	Date of Sampling	Location	Condition	Dust Concentration fibre /cc of air	Remarks
1	30.05.2017	Static Fibre Godown	Fibre bags are stored properly. Torn bags are sealed. Fork Lift used for shifting fibre bags from Godown to E R Mill.	< 0.1 (0.024)	---
2	30.05.2017	Personal B O D - E R Mill	The worker carrying the Sampler was feeding fibre bags through the Roller Conveyor. E R Mill and Dust Collector in operation.	< 0.1 (0.052)	---
3	30.05.2017	Static E R Mill - Wet Opener	The Static Sample is collected from near E R Mill - Wet Opener during the production of F C C Sheets. E R Mill in operation.	< 0.1 (0.048)	---

For JR LABS

Environmental Hygienist

B-305 & 309, Vasudha Apartments,
Guthubullapur Road, New Jeedimetla,
HYDERABAD - 500 067,
TELENGANA, INDIA.

AN ISO 9001 : 2008 CERTIFIED LAB



☎ : 040-42300546, 27230750, 27230966
E-mail : jr labs@gmail.com
jr labs@rediffmail.com
Fax : 040-23775321
jr labs@yahoo.in



REPORT ON RESPIRABLE ASBESTOS FIBRE DUST CONCENTRATION

Project

M/s. RAMCO INDUSTRIES Ltd.,
DEWANMARA AYMA, HARIATARA, KHARAGPUR
PASCHIM MEDINIPUR, WEST BENGAL

Sampler used

Samples collected by JR Labs
using SKC AirLite,
Casella AFC 123 &
Envirotech - II

Flow rate

1.0 L P M
Sampling Duration : 60 minutes each

Specifications

As per A I A - R T M 1
(IS : 11450) Membrane
Filter Method

Analyzed under

Olympus make, Japan,
B X 40 Phase Contrast
Microscope

PERMISSIBLE EXPOSURE LIMIT VALUE (PELV) AS PER MOEF & P C B = 0.1 fibre per cc of air.

Sl. No.	Date of Sampling	Location	Condition	Dust Concentration fibre /cc of air	Remarks
4	30.05.2017	Personal S F Drum - Cutter Off	The worker carrying the Sampler was cutting the Sheets at Green Stage on main Machine along with another worker.	< 0.1 (0.020)	---
5	30.05.2017	Static Stripping	The Static Sample is collected during the stripping of F C C Sheets. Plant was in production of F C C Sheets.	< 0.1 (0.040)	---
6	30.05.2017	Personal M G section - Moulding	The Worker carrying the Sampler was making R1 & R2 types of Moulded articles during the period of sampling. Semi wet process.	< 0.1 (0.056)	---

For JR LABS

Environmental Hygienist





12.06.2017

REPORT ON RESPIRABLE ASBESTOS FIBRE DUST CONCENTRATION

Project

M/s. RAMCO INDUSTRIES Ltd.,
DEWANMARA AYMA, HARIATARA, KHARAGPUR
PASCHIM MEDINIPUR, WEST BENGAL

Sampler used

Samples collected by J R Labs
using SKC AirLite,
Envirotech - II &
SKC Side Kick 51 Ex

Flow rate

1.0 L P M

Sampling Duration

60 minutes each

Specifications

As per A I A - R T M 1
(IS : 11450) Membrane
Filter Method

Analyzed under

Olympus make, Japan,
B X 40 Phase Contrast
Microscope

PERMISSIBLE EXPOSURE LIMIT VALUE (PELV)

AS PER MOEF & P C B = 0.1 fibre per cc of air.

Sl. No.	Date of Sampling	Location	Condition	Dust Concentration fibre /cc of air	Remarks
7	30.05.2017	Salvaging Section	The worker carrying the Sampler was reclaiming the Sheets. F C C rejected Sheets were getting reclaimed. Wet process.	< 0.1 (0.044)	---
8	30.05.2017	Ball Mill	The worker carrying the Sampler was engaged in operation of Ball Mill including feeding of broken F C C Sheets. Wet process.	< 0.1 (0.060)	---
9	30.05.2017	Personal Pulverizer	The worker carrying the Sampler was feeding broken F C C Sheets through the chute of Pulverizer.	< 0.1 (0.088)	---

For J R LABS

Environmental Hygienist



12.06.2017

REPORT ON RESPIRABLE ASBESTOS FIBRE DUST CONCENTRATION

Project

M/s. RAMCO INDUSTRIES Ltd.,
DEWANMARA AYMA, HARIATARA, KHARAGPUR
PASCHIM MEDINIPUR, WEST BENGAL

Sampler used

Samples collected by JR Labs
using SKC 224-PCXR8.II &
SKC Side Kick 51 Ex
Analyzed under : Olympus make, Japan,
BX 40 Phase Contrast
Microscope

Flow rate

: 1.0 L P M

Sampling Duration : 60 minutes each

Specifications : As per A I A - R T M I
(IS : 11450) Membrane
Filter Method

PERMISSIBLE EXPOSURE LIMIT VALUE (PELV)

AS PER MOEF & P C B = 0.1 fibre per cc of air.

Sl. No.	Date of Sampling	Location	Condition	Dust Concentration fibre /cc of air	Remarks
10	30.05.2017	Personal Fork Lift Operator	The Fork Lift Operator carrying the Sampler was engaged in different work activities like; shifting of Sheets from Destacking Area to Stock Yard during the period of sampling.	< 0.1 (0.032)	---
11	30.05.2017	Personal QC Lab Assistant	The QC Lab Assistant carrying the Sampler was engaged in different Lab activities during the period of Sampling.	< 0.1 (0.096)	---

For JR LABS

Environmental Hygienist



REPORT ON RESPIRABLE ASBESTOS FIBRE DUST CONCENTRATION

12.06.2017

Project

M/s. RAMCO INDUSTRIES Ltd.,
DEWANMARA AYMA, HARIATARA, KHARAGPUR
PASCHIM MEDINIPUR, WEST BENGAL

Sampler used

Samples collected by JR Labs
using Spectro : SLE-PS-154.II &
Spectro : SLE-PS-154.I

Analyzed under : Olympus make, Japan,
BX 40 Phase Contrast
Microscope

Flow rate

: 1.0 L P M

Sampling Duration : 60 minutes each

Filter Method
(IS : 11450) Membrane

PERMISSIBLE EXPOSURE LIMIT VALUE (PELV)

AS PER MOEF & P C B = 0.1 fibre per cc of air.

Sl. No.	Date of Sampling	Location	Condition	Dust Concentration fibre /cc of air	Remarks
12	30.05.2017	Static Pulp Slurry preparation Area	The Static Sample is collected during Pulp Slurry preparation. Plant was in production of F C C Sheets.	< 0.1 (0.028)	---
13	30.05.2017	Static Work Zone Area of the Plant	The Static Sample is collected during the production of F C C Sheets.	< 0.1 (0.036)	---

For JR LABS

Environmental Hygienist



12.06.2017

REPORT ON RESPIRABLE ASBESTOS FIBRE DUST CONCENTRATION

Project : M/s. RAMCO INDUSTRIES Ltd.,
DEWANMARA AYMA, HARIATARA, KHARAGPUR
PASCHIM MEDINIPUR, WEST BENGAL

Sampler used :

Samples collected by JR Labs
using Casella T13180-II,
Spectro : SLE-PS-154:III &
Casella T13180-I

Flow rate :

1.0 L P M

Sampling Duration : 60 minutes each

PERMISSIBLE EXPOSURE LIMIT VALUE (PELV)

AS PER MOEF & P C B = 0.1 fibre per cc of air.

Sl. No.	Date of Sampling	Location	Condition	Dust Concentration fibre /cc of air	Remarks
14	30.05.2017	Static Ambient Air: Stock Yard - Sheet Loading Area	The Static Sample is collected from Stock Yard - Sheet Loading Area during loading of different sizes of F C C Sheets into the Truck.	< 0.1 (0.064)	---
15	30.05.2017	Static Ambient Air: Near Main Gate - Security office	The Static Sample is collected from near the Main Gate - Security Office. Plant was in operation.	< 0.1 (0.040)	---
16	30.05.2017	Static Ambient Air :- Near Canteen	The Static Sample is collected from near Canteen. Plant was in operation.	< 0.1 (0.044)	---

For JR LABS

Environmental Hygienist



ENVIRONMENT & OCCUPATIONAL HEALTH SERVICES

Rated as 'No.1' Laboratory for Counting of Asbestos Fibre by Institute of Occupational Medicine, Edinburgh U.K., World Health Organization Collaborating Centre for Occupational Health.

T C : May'17 - Stack - E R M - A F C

12.06.2017

REPORT ON RESPIRABLE ASBESTOS FIBRE DUST CONCENTRATION

FIBRE D E STACK

Project : M/s. RAMCO INDUSTRIES Ltd.,
DEWANMARA AYMA, HARIATARA, KHARAGPUR
PASCHIM MEDINIPUR, WEST BENGAL

Sampler used : Envirotech VSSI
Analyzed under : Olympus make, Japan,
B X 40 Phase Contrast
Microscope
Specifications : As per A I A - R T M 1
(IS:11450) & ISO:10397
Membrane Filter Method
Flow rate : 10 L P M
Sampling Duration : 10 minutes

PERMISSIBLE EXPOSURE LIMIT VALUE (PELV) AS PER MOEF & P C B = 0.2 fibre per cc of air.

Date of sampling	Location	Condition	Dust concentration fibre /cc of air	Remarks
30.05.2017	Fibre D E Stack connected to B O D & Edge Runner Mill	---	0.168	---

For J R LABS

Environmental Hygienist

B-305 & 309, Vasudha Apartments,
Guthubullapur Road, New Jeedimetla,
HYDERABAD - 500 067,
TELANGANA, INDIA.



☎ : 040-42300546, 27230750, 27230966
Fax : 040-23775321
E-mail : jrlabs@rediffmail.com
jrlabs@gmail.com
jrlabs@yahoo.in

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 3. Retention period of tested samples (Thimble) is 6 months from the date of issue of test report unless otherwise specified.
 4. All general informations of stack are provided by the party.

Parbati Golai
 Manager-Lab, Env. Div.
 Indicative Consultant India

Parbati Golai
 Manager Laboratory
 Signatory Authority

Parbati Golai
 Manager-Lab, Env. Div.
 Indicative Consultant India

Checked By

Sl. No.	Parameters	Result Obtained
01.	Particulate Matter (mg/Nm ³)	1.3
02.	Particulate Matter Normalised to 12% CO ₂ (V/V) - (mg/Nm ³)	-
03.	Sulphur di-oxide (mg/Nm ³)	-
04.	NOx (mg/m ³)	-
05.	CO % (V/V)	<0.2
06.	CO ₂ % (V/V)	<0.2

C) RESULT OF SAMPLING:

Flue Gas Temperature (°C)	38	Steam Generation Capacity :	
Barometric Pressure (mm Hg)	755	a) Rated	-
Velocity of Gas flow (m/s)	8.50	b) Running	-
Quantity of Gas flow (Nm ³ /hr)	2061.25	Load : a) Rated	-
Pressure	-	b) Running	3 Ton/Hr.

B) PHYSICAL DATA:

Stack attached to	Edge runner Mill BOD & Slurry	Material of Construction	M.S. Circular
Emission due to	Process Activities	Stack ID at sampling point (M)	0.30
Fuel Used	-	At Bottom (M)	-
Rated Fuel Consumption	-	At Top (M)	-
Working Fuel Consumption	-	Height Details :	
Calorific Value (Kcal/kg)	-	a) Total Ht. Of stack from GL (M)	15.0
Sulphur Content (% by Wt)	-	b) Total Ht. Of stack from RL (M)	-
Ash Content (% by Wt)	-	c) Ht. of sampling port from GL (M)	8.40
Pollution Control Device	Bag Filter & Wet Scrubber	d) Ht. of port from disturbance zone (M)	-
Whether Stack is provided with permanent Platform/Ladder : Yes			

A) GENERAL INFORMATION ABOUT STACK:

Report No.	IC/17-18/234	Sample Ref. No.	A/H/234
Issued To	M/s. Ramco Industries Ltd.	Report Date	07.06.17
Address	Dewanmuro, Ayma, P.O.-Haritara, P.S.-Kharagpur, PaschimMedinipur.	Date of Sampling	05.06.17
Sample Description	Stack Air	Analysis Started on	06.06.17
Location	Edge Runner Mill BOD & Slurry Mixing	Analysis completed on	06.06.17
Sample Condition	In Glass Microfibre Thimble	Time of Sampling	10:00 AM
Sampling Method	CPCB, Emission Regulation (Part III)	Sample is drawn by M/s. Indicative Consultant India	
Test Method	CPCB, Emission Regulation (Part III), IS: 11255 (Part -1), 1985, Reaffirmed 2003, IS: 11255 (Part -3) 2008, ORSAT Method		

TEST REPORT

ISO/IEC 17025:2005, ACCREDITED BY NABL, DEPARTMENT OF SCIENCE AND TECHNOLOGY, GOVERNMENT OF INDIA IN THE FIELD OF CHEMICAL, MECHANICAL AND BUILDING MATERIALS TESTING.

HPL Link Road, Basudevpur, P.O.-Khanjanchak, Haldia, Dist.-Purba Medinipur, PIN-721602

(CONSULTANT, SURVEYOR & REGD. TEST HOUSE)

S.S.T. Reg. No. 190192100010

ISO / IEC 17025:2005
 Certificate No.
 T-1835 (Chemical)
 NABL ACCREDITED LABORATORY



Tel: 03224-275765
 Tel/Fax: 03224-276511
 Mob: 9434017584, 9232395890
 E-mail: jayantiasarkar67@gmail.com
 indicaveconsultantindia@gmail.com
 Website: www.indicaveconsultantindia.com

Towards Sustainable Growth

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4. All general informations of stack are provided by the party.

tive Consultant India
Parbat Gopin
Manager Lab. Env. Div.
Parbat Gopin
(Manager Laboratory)
Signatory Authority

Checked By

Sl. No.	Parameters	Result Obtained
01.	Particulate Matter (mg/Nm ³)	1.8
02.	Particulate Matter Normalised to 12% CO ₂ (V/V) - (mg/Nm ³)	-
03.	Sulphur di-oxide (mg/Nm ³)	-
04.	NOx (mg/m ³)	-
05.	CO % (V/V)	<0.2
06.	CO ₂ % (V/V)	<0.2

C. | RESULT OF SAMPLING:

Pressure	:	-	Load : a) Rated b) Running b) Running a) Rated Steam Generation Capacity :	10 Ton/Hr.
Quantity of Gas flow (Nm ³ /hr)	:	3444.88		
Velocity of Gas flow (m/s)	:	8.02		
Barometric Pressure,(mm Hg)	:	755		
Flue Gas Temperature (°C)	:	39		
Flue Gas	:	-		

B. PHYSICAL DATA:

Particulars of the Plant		Whether Stack is provided with permanent Platform/Ladder : Yes	
Stack attached to	:		
Emission due to	:		
Fuel Used	:		
Rated Fuel Consumption	:		
Working Fuel Consumption	:		
Calorific Value(Kcal/kg)	:		
Sulphur Content (% by Wt)	:		
Ash Content (% by Wt)	:		
Pollution Control Device	:		
Bag Filter	:		
Shape of Stack	:		
Material of Construction	:		
Stack ID at sampling point (M)	:		
At Bottom (M)	:		
At Top (M)	:		
Height Details :	:		
a) Total Ht. Of stack from GL(M)	:		
b) Total Ht. Of stack from RL(M)	:		
c) Ht. of sampling port from GL(M)	:		
d) Ht. of port from disturbance zone (M)	:		

A. GENERAL INFORMATION ABOUT STACK:

Report No.	Issued To	Address	Sample Description	Location	Sample Condition	Sampling Method	Test Method
IC/A/H/17-18/235	M/s. Ramco Industries Ltd	Dewannaro, Ayma, P.O.-Hajira	P.S.-Kharagpur, Paschim Medinipur	Stack Air	Cement & Fly Ash Feeding	In Glass Microfibre Thimble	CPCB, Emission Regulation
							CPCB, Emission Regulation
							CPCB, Emission Regulation

Sample Ref. No.	A/H/235
Report Date	07.06.17
Date of Sampling	03.06.17
Analysis Started on	06.06.17
Analysis completed on	06.06.17
Time of Sampling	11:00 AM

TEST REPORT

ISO/IEC 17025:2005, ACCREDITED BY NABL, DEPARTMENT OF SCIENCE AND TECHNOLOGY,
GOVERNMENT OF INDIA IN THE FIELD OF CHEMICAL, MECHANICAL AND BUILDING MATERIALS TESTING.

HPL Link Road, Basudevpur, P.O.-Khanjanchak, Haldia, Dist.-Purba Medinipur, PIN-721602

(CONSULTANT, SURVEYOR & REGD. TEST HOUSE)

S.S.I. Reg. No. 190192100010

Tel: 03224-275765
Tel/Fax: 03224-276511
Mob: 9434017584, 92232369890
E-mail: jayantasarkar67@gmail.com
indicativeconsultingindia@gmail.com
Website: www.indicativeconsultingindia.com

FORMAT NO.: ICI/FM/52

Towards Sustainable Growth

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 4. All general informations of stock are provided by the party.

For, Indicative Consultant India
 Parbat Kumar, Div.
 Manager Laboratory
 Signatory Authority

Checked By

Sl. No.	Parameters	Result Obtained
01.	Particulate Matter (mg/Nm ³)	34.0
02.	Particulate Matter Normalised to 12% CO ₂ (V/V) - (mg/Nm ³)	-
03.	Sulphur di-oxide (mg/ Nm ³)	256.59
04.	NOx (mg/m ³)	150.08
05.	CO % (V/V)	<0.2
06.	CO ₂ % (V/V)	6.8

C) RESULT OF SAMPLING:

Flue Gas Temperature (°C)	176	Steam Generation Capacity:	
Barometric Pressure (mm Hg)	755	a) Rated	
Velocity of Gas flow (m/s)	14.24	b) Running	725 KVA
Quantity of Gas flow (Nm ³ /hr)	1796.68	Load : a) Rated	725 KVA
Pressure	-	b) Running	

B.) PHYSICAL DATA:

Whether Stack is provided with permanent Platform/Ladder : Yes	
Pollution Control Device	: Nil
Sulphur Content (% by Wt)	: -
Ash Content (% by Wt)	: -
Calorific Value (Kcal/kg)	: -
Working Fuel Consumption	: 145 Lit/Hr.
Rated Fuel Consumption	: 145 Lit/Hr.
Fuel Used	: H.S.D
Emission due to	: Combustion of H.S.D
Stack attached to	: D.G. Set (725 KVA)
Particulars of the Plant	
Shape of Stack	: Circular
Material of Construction	: M.S.
Stack ID at sampling point (M)	: 0.26
At Bottom (M)	: -
At Top (M)	: 0.26
Height Details :	
a) Total Ht. Of stack from GL(M)	: 12.50
b) Total Ht. Of stack from RL(M)	: -
c) Ht. of sampling port from GL(M)	: 8.62
d) Ht. of port from disturbance zone (M)	: -

A.) GENERAL INFORMATION ABOUT STACK:

Sample is drawn by M/s. Indicative Consultant India	
Report No.	: ICI/A/H/17-18/236
Issued To	: M/s. Ramco Industries Ltd.
Address	: Dewannaro, Ayma, P.O.-Haratara, P.S.-Kharagpur, PaschimMedinipur.
Sample Description	: Stack Air
Location	: D.G. Set (725 KVA)
Sample Condition	: In Glass Microfibre Thimble & Plastic Bottle
Sampling Method	: CPGB, Emission Regulation (Part III)
Test Method	: CPGB, Emission Regulation (Part III), IS: 11255 (Part -1), 1985, Reaffirmed 2003, IS: 11255 (Part -2), 1985, Reaffirmed 2003, ORSAT Method, EPA Method No. - 7, 3), 2008, IS: 11255 (Part -2), 1985, Reaffirmed 2003, ORSAT Method, EPA Method No. - 7.
Sample Ref. No.	: A/H/236
Report Date	: 07.06.17
Date of Sampling	: 05.06.17
Analysis Started on	: 06.06.17
Analysis completed on	: 06.06.17
Time of Sampling	: 12:05 PM

TEST REPORT

ISO/IEC 17025:2005, ACCREDITED BY NABL, DEPARTMENT OF SCIENCE AND TECHNOLOGY, GOVERNMENT OF INDIA IN THE FIELD OF CHEMICAL, MECHANICAL AND BUILDING MATERIALS TESTING.

HPL Link Road, Basudevpur, P.O.-Khanjanachak, Haldia, Dist.-Purba Medinipur, PIN-721602

(CONSULTANT, SURVEYOR & REGD. TEST HOUSE)

S.S.I. Reg. No. 190192100010

NABL ACCREDITED LABORATORY
 T-1835 (Chemical)
 Certificate No.

ISO / IEC 17025:2005



INDICATIVE CONSULTANT INDIA

Tel: 03224-275765
 Tel Fax: 03224-276511
 Mob: 9434017584, 9232395890
 E-mail: jayantiasarkar67@gmail.com
 indicativiconsultantindia@gmail.com
 Website: www.indicativiconsultantindia.com

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GOVERNMENT OF INDIA IN THE FIELD OF CHEMICAL, MECHANICAL AND BUILDING MATERIALS TESTING.

TEST REPORT

Sample is drawn by M/s. Indicative Consultant India

Report No.

IC/I/A/H-17-18/237

Issued To

M/s. Ramco Industries Ltd.

Address

Dewanmuro, Ayma, P.O.-Hariatara, P.S.-Kharagpur, PaschimMedinipur.

Sample Description

Stack Air

Location

Pulverizer Section

Sample Condition

In Glass Microfibre Thimble

Sampling Method

CPCB, Emission Regulation (Part III)

Test Method

3) 2008, ORSAT Method

A.1 GENERAL INFORMATION ABOUT STACK:

Whether Stack is provided with permanent Platform/Ladder : Yes

Pollution Control Device : Bag Filter

Stack attached to : Pulverizer Section

Emission due to : Process Activity

Fuel Used : -

Rated Fuel Consumption : -

Working Fuel Consumption : -

Calorific Value(Kcal/kg) : -

Sulphur Content (% by Wt) : -

Ash Content (% by Wt) : -

Height Details : a) Total Ht. Of stack from GL(M) : 15.0

b) Total Ht. Of stack from RL(M) : -

c) Ht. of sampling port from GL(M) : 6.70

d) Ht. of port from disturbance zone (M) : -

Stack ID at sampling point (M) : 0.2541

Material of Construction : M.S.

Shape of Stack : Circular

Steam Generation Capacity : a) Rated : -

b) Running : -

Load : a) Rated : -

b) Running : 2 MT/Hr.

Barometric Pressure.(mm Hg) : 755

Velocity of Gas flow (m/s) : 7.83

Quantity of Gas flow (Nm³/hr) : 1335.94

Pressure : -

C.1 RESULT OF SAMPLING:

Sl. No. Parameters Result Obtained

01. Particulate Matter (mg/Nm³) : 14.0

02. Particulate Matter Normalised to 12% CO₂ (V/V) - (mg/Nm³) : -

03. Sulphur di-oxide (mg/Nm³) : -

04. NOx (mg/m³) : -

05. CO % (V/V) : <0.2

06. CO₂ % (V/V) : <0.2

End of Report

For, Indicative Consultant India

Manager-lab, Env. Div.

Parbat, Indicative Consultant India

Signatory Authority
(Manager Laboratory)

Checked By

[Signature]

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(CONSULTANT, SURVEYOR & REGD. TEST HOUSE)
HPL Link Road, Basudevpur, Khanjanchak,
Haldia, Purba Medinipur, PIN-721602

☎ : 03224-275765, 📠 : 9434017584, 9232395890, 7797506973
E-mail : jayantiasarkar7@gmail.com, indicativeconsultantindia@gmail.com, Website : www.indicativeconsultantindia.com

TEST REPORT

Sample is drawn by M/s. Indicative Consultant India

Report No. : ICI/A/17-18/RIL/056
Issued To : M/s. Ramco Industries Ltd.
Address : Dewannam, Ayma, P.O.-Haratara,
P.S.-Kharagpur, Paschim Medinipur.
Sample Description : Ambient Air
Location : Near Main Gate
Sample Condition : Glass Microfibre Filter Paper & Plastic Bottle
Sampling Method : CPCB, Emission Regulation (Part III)
Test Method : CPCB, Emission Regulation (Part III), IS: 5182 (Part - 23) 2006 (RA 2012), USEPA
CFR 40(Part- 50): Appendix L, IS: 5182 (Part - 2):2001 (RA 2012), IS: 5182 (Part - 6):2006 (RA 2012), Non-Dispersive Infrared Spectrometry Method, Soxhlet Extraction and GC analysis, Atomic Absorption Spectrophotometric Method, Indophenol Blue Method

Sample Ref. No. : RIL/056
Report Date : 15.06.17
Date of Sampling : 05.06.17
Analysis Started on : 06.06.17
Analysis Completed on : 14.06.17

Ambient Temperature : 32.0
in °C (Average)

Time of Sampling	Concentration (µg/m ³)										Concentration (ng/m ³)
	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	Pb	Benzene	NH ₃	CO	Benzo(a) Pyrene	As	Ni
09:30 AM to 05:30 PM	74.29	23.40	20.25	41.57	BDL	BDL	BDL	0.0573	BDL	BDL	BDL
05:45 PM to 01:45 AM	82.63	28.85	22.18	43.30	BDL	BDL	BDL	0.1031	BDL	BDL	BDL
02:00 AM to 10:00 AM	76.36	22.14	19.29	42.44	BDL	BDL	BDL	0.3512	BDL	BDL	BDL

End of Report

Ambient Air Quality Standard (National)
PM₁₀ = 100 µg/m³, PM_{2.5} = 60 µg/m³, SO₂ = 80 µg/m³, NO₂ = 80 µg/m³, Lead = 1.0 µg/m³, Ammonia = 400 µg/m³, 24 hours basis, Carbon mono oxide = 2 mg/m³, 8 hours basis, Benzene = 3 µg/m³, Benzopyrene = 1 ng/m³, Arsenic = 6 ng/m³, Nickel = 20 ng/m³, Annual basis
For Industrial, Residential, Rural & Other Area and Ecologically Sensitive Area

Ref : National Ambient Air Quality Standards vide Central Pollution Control Board, New Delhi Notification dated 18th November 2009

For, Indicative Consultant India

Parbat Golui
(Manager-Laboratory)
Manager-Lab, Env. Div.
Indicative Consultant India
Signatory Authority

Checked By

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S.S.L. Reg. No. 190192100010



INDICATIVE CONSULTANT INDIA
(CONSULTANT, SURVEYOR & REGD. TEST HOUSE)
HPL Link Road, Basudevpur, Khanjanchak,
Haldia, Purba Medinipur, PIN-721602

☎ : 03224-275765, 📠 : 9434017584, 9232395890, 7797506973

E-mail : jayantasarkar67@gmail.com, indicativeconsultantindia@gmail.com, Website : www.indicativeconsultantindia.com

TEST REPORT

Sample is drawn by M/s. Indicative Consultant India

Report No. : ICI/A/17-18/RIL/056A
Issued To : M/s. Ramco Industries Ltd.
Address : Dewanmuro, Ayma, P.O.-Haratara,
P.S.-Kharagpur, Paschim Medinipur.
Sample Description : Ambient Air
Location : Near Main Gate
Sample Condition : Suction of ambient air direct into analyser through Teflon tube and in Plastic Bottle
Sampling Method : UV Photometric Method / Air Sampling & Analysis 3rd Edition, CPCB Guideline (Vol. - 1)
Test Method : Using imported O3 Analyser

Sample Ref. No. : RIL/056A
Report Date : 15.06.17
Date of Sampling : 05.06.17
Analysis Started on : 07.06.17
Analysis Completed on : 07.06.17

Concentration ($\mu\text{g}/\text{m}^3$)	Time	
	09:30 AM	05:30 PM
Ozone as O ₃	31.07	

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

Limit: ($\mu\text{g}/\text{m}^3$) Ambient Air Quality standard (National)
O₃-100 $\mu\text{g}/\text{m}^3$, 8 hours basis (Industrial, Residential, Rural & Other Area and Ecologically Sensitive Area)

Ref: National Ambient Air Quality Standards vide Central Pollution Control Board, New Delhi Notification dated 18th November 2009

For, Indicative Consultant India

Parbati Golui
(Manager-Laboratory)
Signatory Authority

Parbati Golui
Manager-Lab, Env. Div.
Indicative Consultant India

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INDICATIVE CONSULTANT INDIA

(CONSULTANT, SURVEYOR & REGD. TEST HOUSE)

HPL Link Road, Basudevapur, Khanjanchak,
Haldia, Purba Medinipur, PIN-721602

☎ : 03224-275765, 📠 : 9434017584, 9232395890, 7797506973

E-mail : jayantasarkar67@gmail.com, indicativeconsultantindia@gmail.com, Website : www.indicativeconsultantindia.com

TEST REPORT

Sample is drawn by M/s. Indicative Consultant India

Report No. : ICI/A/17-18/RIL/057
 Issued To : M/s. Ramco Industries Ltd.
 Address : Dewannar, Ayma, P.O.-Haratara,
 P.S.-Kharagpur, Paschim Medinipur.

Sample Description : Ambient Air
 Location : Near Scrap Yard
 Sample Condition : Glass Microfibre Filter Paper & Plastic Bottle
 Sampling Method : CPCB, Emission Regulation (Part III)
 Test Method : CPCB, Emission Regulation (Part III), IS: 5182 (Part - 23) 2006 (RA 2012), USEPA

GC analysis, Atomic Absorption Spectrophotometric Method, Indophenol Blue Method
 CFR 40(Part- 50): Appendix L, IS: 5182 (Part - 2):2001 (RA 2012), IS: 5182 (Part - 6):2006 (RA 2012), Non-Dispersive Infrared Spectrometry Method, Soxhlet Extraction and

Ambient Temperature : 32.0

in °C (Average)

Time of Sampling	Concentration (µg / m ³)										Concentration (ng / m ³)	
	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	Pb	Benzene	NH ₃	CO	Benzo(a) Pyrene	As	Ni	
10:00 AM to 06:00 PM	71.89	19.88	16.40	40.70	BDL	BDL	BDL	0.0542	BDL	BDL	BDL	BDL
06:15 PM to 02:15 AM	79.20	26.02	19.29	41.57	BDL	BDL	BDL	0.1135	BDL	BDL	BDL	BDL
02:30 AM to 10:30 AM	73.54	21.67	17.36	39.84	BDL	BDL	BDL	0.3942	BDL	BDL	BDL	BDL

End of Report

Limits (µg / m³)
 PM₁₀=100 µg/m³, PM_{2.5}=60 µg/m³, SO₂=80 µg/m³, NO₂=80 µg/m³, Lead=1.0 µg/m³, Ammonia=400 µg/m³, 24 hours basis, Carbon mono oxide=2 mg/m³, 24 hours basis, Benzene=5 µg/m³, Benzopyrene=1 ng/m³, Arsenic=6 ng/m³, Nickel=20ng/m³, Annual basis
 For, Industrial, Residential, Rural & Other Area and Ecologically Sensitive Area

Ref : National Ambient Air Quality Standards vide Central Pollution Control Board, New Delhi Notification dated 18th November 2009

For, Indicative Consultant India

Parbati Golu
 Manager-Lab, Env. Div.
 Indicative Consultant India

Signatory Authority
 (Manager-Laboratory)

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(CONSULTANT, SURVEYOR & REGD. TEST HOUSE)
HPL Link Road, Basudevpur, Khanjanchak,
Haldia, Purba Medinipur, PIN-721602

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E-mail : jayantasarakar67@gmail.com, indicativeconsultantindia@gmail.com, Website : www.indicativeconsultantindia.com

TEST REPORT

Sample is drawn by M/s. Indicative Consultant India
Report No. ICVA/17-18/RIL/057A
Issued To : M/s. Ramco Industries Ltd.
Address : Dewannaro, Ayma, P.O.-Hariatara,
P.S.-Kharagpur, Paschim Medinipur.

Sample Description
Location : Near Scrap Yard
Sample Condition : Suction of ambient air direct into analyser through Teflon tube and in Plastic Bottle
Sampling Method : UV Photometric Method / Air Sampling & Analysis 3rd Edition, CPCB Guideline (Vol. - 1)
Test Method : Using imported O3 Analyser

Sample Ref. No. : RIL/057A
Report Date : 15.06.17
Date of Sampling : 05.06.17
Analysis Started on : 07.06.17
Analysis Completed on : 07.06.17

Concentration ($\mu\text{g}/\text{m}^3$)	Time	
	10:00 AM to 06:00 PM	
Ozone as O ₃	29.35	

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

Limit: ($\mu\text{g}/\text{m}^3$) Ambient Air Quality standard (National)
O₃-100 $\mu\text{g}/\text{m}^3$, 8 hours basis (Industrial, Residential, Rural & Other area and Ecologically Sensitive Area)
Ref: National Ambient Air Quality Standards vide Central Pollution Control Board, New Delhi Notification dated 18th November 2009

For, Indicative Consultant India
Parbat Golui
(Manager-Laboratory)
Signatory Authority
Parbat Golui
Manager-lab, Env. Div.
Indicative Consultant India

Checked By :
[Signature]

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S.S.I. Reg. No. 190192100010



(CONSULTANT, SURVEYOR & REGD. TEST HOUSE)
HPL Link Road, Basudevpur, Khanjanchak,
Haldia, Purba Medinipur, PIN-721602

☎ : 03224-275765, 📠 : 9434017584, 9232395890, 7797506973
E-mail : jayantasarakar7@gmail.com, indicativeconsultantindia@gmail.com, Website : www.indicativeconsultantindia.com

TEST REPORT

Sample is drawn by M/s. Indicative Consultant India

Report No. : ICI/A/17-18/RIL/058
Issued To : M/s. Ramco Industries Ltd.
Address : Dewanmaro, Ayma, P.O.-Hariatara,
P.S.-Kharagpur, Paschim Medinipur.

Sample Description : Ambient Air
Location : Back Side of the Plant
Sample Condition : Glass Microfibre Filter Paper & Plastic Bottle
Sampling Method : CP/CB, Emission Regulation (Part III)
Test Method : CP/CB, Emission Regulation (Part III), IS: 5182 (Part - 23) 2006 (RA 2012), USEPA

Ambient Temperature : 32.0
in °C (Average)
GC analysis, Atomic Absorption Spectrophotometric Method, Indophenol Blue Method
CFR 40(Part- 50): Appendix L, IS: 5182 (Part - 2):2001 (RA 2012), IS: 5182 (Part - 6):2006 (RA 2012), Non-Dispersive Infrared Spectrometry Method, Soxlet Extraction and

Sample Ref. No. : RIL/058
Report Date : 15.06.17
Date of Sampling : 05.06.17
Analysis Started on : 06.06.17
Analysis Completed on : 14.06.17

Time of		Concentration (µg / m ³)									
Sampling		PM ₁₀	PM _{2.5}	SO ₂	NO ₂	Pb	Benzene	NH ₃	CO	Benzo(a) Pyrene	As
10:15 AM	to	62.23	22.62	16.40	39.84	BDL	BDL	BDL	0.0429	BDL	BDL
06:15 PM	to	62.23	22.62	16.40	39.84	BDL	BDL	BDL	0.0429	BDL	BDL
06:30 PM	to	73.54	27.70	18.33	42.44	BDL	BDL	BDL	0.0715	BDL	BDL
02:30 AM	to	73.54	27.70	18.33	42.44	BDL	BDL	BDL	0.0715	BDL	BDL
02:45 AM	to	69.09	23.69	15.43	40.70	BDL	BDL	BDL	0.4611	BDL	BDL
10:45 AM	to	69.09	23.69	15.43	40.70	BDL	BDL	BDL	0.4611	BDL	BDL

End of Report

Limit: (µg / m³)
PM₁₀ = 100 µg / m³, PM_{2.5} = 60 µg / m³, SO₂ = 80 µg / m³, NO₂ = 80 µg / m³, Lead = 1.0 µg / m³, Ammonia = 400 µg / m³, 24 hours basis, Carbon mono oxide = 2 mg / m³, 8 hours basis, Benzene = 5 µg / m³, Benzopyrene = 1 ng / m³, Arsenic = 6 ng / m³, Nickel = 20 ng / m³, Annual basis
For, Industrial, Residential, Rural & Other Area and Ecologically Sensitive Area
Ref : National Ambient Air Quality Standards vide Central Pollution Control Board, New Delhi Notification dated 18th November 2009

For, Indicative Consultant India

Parbat Golui
(Manager-Laboratory)
Signatory Authority

Parbat Golui
Manager-Lab, Env. Div.
Indicative Consultant India

Note : 1. Test results shown in this test report relate only to the item tested.
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Haldia, Purba Medinipur, PIN-721602



INDICATIVE CONSULTANT INDIA

☎ : 03224-275765, 📠 : 9434017584, 9232395890, 7797506973

E-mail : jayantasarkar67@gmail.com, indicativeconsultantindia@gmail.com, Website : www.indicativeconsultantindia.com

TEST REPORT

Sample is drawn by M/s. Indicative Consultant India

Report No. : ICI/A/17-18/RIL/058A
Issued To : M/s. Ramco Industries Ltd.
Address : Dewannaro, Ayma, P.O.-Haratara,
P.S.-Kharagpur, Paschim Medinipur.
Sample Description : Ambient Air
Location : Back Side of the Plant
Sample Condition : Suction of ambient air direct into analyser through Teflon tube and in Plastic Bottle
Sampling Method : UV Photometric Method / Air Sampling & Analysis 3rd Edition, CPCB Guideline (Vol. - 1)
Test Method : Using imported O3 Analyser

Sample Ref. No. : RIL/058A
Report Date : 15.06.17
Date of Sampling : 05.06.17
Analysis Started on : 07.06.17
Analysis Completed on : 07.06.17

Time	Concentration ($\mu\text{g}/\text{m}^3$)	
	Ozone as O ₃	
10:15 AM to 06:15 PM	29.12	

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

Limit: ($\mu\text{g}/\text{m}^3$) Ambient Air Quality standard (National)
O₃-100 $\mu\text{g}/\text{m}^3$, 8 hours basis (Industrial, Residential, Rural & Other Area and Ecologically Sensitive Area)

Ref: National Ambient Air Quality Standards vide Central Pollution Control Board, New Delhi Notification dated 18th November 2009

For, Indicative Consultant India

Parbati Golui
(Manager-Laboratory)
Signatory Authority

Parbati Golui
Manager-Lab, Env. Div.
Indicative Consultant India

Checked By

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TEST REPORT

Sample is drawn by M/s. Indicative Consultant India

Report No. : ICI/A/17-18/RIL/059
Issued To : M/s. Ramco Industries Ltd.
Address : Devanamaro, Ayma, P.O.-Haratara,
P.S.-Kharagpur, Paschim Medinipur.

Sample Ref. No. : RIL/059
Report Date : 15.06.17
Date of Sampling : 05.06.17
Analysis Started on : 07.06.17
Analysis Completed on : 14.06.17

Sample Description

Ambient Air
Near Stock Yard
Glass Microfibre Filter Paper & Plastic Bottle

Sample Condition

CPCB, Emission Regulation (Part III)

Sampling Method

Test Method

GC analysis, Atomic Absorption Spectrophotometric Method, Indophenol Blue Method
6:2006 (RA 2012), Non-Dispersive Infrared Spectrometry Method, Soxhlet Extraction and
CFR 40(Part- 50): Appendix L, IS: 5182 (Part - 2):2001 (RA 2012), IS: 5182 (Part -
CPCB, Emission Regulation (Part III), IS: 5182 (Part - 23) 2006 (RA 2012), USEPA

in °C (Average)

Time of Sampling	Concentration (µg / m ³)										Concentration (ng / m ³)
	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	Pb	Benzene	NH ₃	CO	Benzo(a) Pyrene	As	Ni
09:45 AM to 05:45 PM	74.47	22.05	14.47	41.57	BDL	BDL	BDL	0.0581	BDL	BDL	BDL
06:00 PM to 02:00 AM	82.45	26.65	16.40	43.30	BDL	BDL	BDL	0.1203	BDL	BDL	BDL
02:15 AM to 10:15 AM	71.30	23.46	13.50	40.70	BDL	BDL	BDL	0.4291	BDL	BDL	BDL

End of Report

Limit: (µg / m³)
Ambient Air Quality standard (National)
PM₁₀ = 100 µg/m³, PM_{2.5} = 60 µg/m³, SO₂ = 80 µg/m³, NO₂ = 80 µg/m³, Lead = 1.0 µg/m³, Ammonia = 400 µg/m³, 24 hours basis, Carbon mono oxide = 2 mg/m³, 8 hours basis, Benzene = 5 µg/m³, Benzopyrene = 1 ng/m³, Arsenic = 6 ng/m³, Nickel = 20 ng/m³, Annual basis
For, Industrial, Residential, Rural & Other Area and Ecologically Sensitive Area

Ref : National Ambient Air Quality Standards vide Central Pollution Control Board, New Delhi Notification dated 18th November 2009

For, Indicative Consultant India

Parbat Golui
Manager-Lab, Env. Div.
Indicative Consultant India
Signatory Authority
(Manager-Laboratory)

Checked By

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TEST REPORT

Sample is drawn by M/s. Indicative Consultant India

Report No. : ICI/A/17-18/RIL/059A
Issued To : M/s. Ramco Industries Ltd.
Address : Dewannamro, Ayma, P.O.-Haratara,
P.S.-Kharagpur, Paschim Medinipur.
Sample Description : Ambient Air
Location : Near Stock Yard
Sample Condition : Suction of ambient air direct into analyser through Teflon tube and in Plastic Bottle
Sampling Method : UV Photometric Method / Air Sampling & Analysis 3rd Edition, CPCB Guideline (Vol. - 1)
Test Method : Using imported O3 Analyser

Sample Ref. No. : RIL/059A
Report Date : 15.06.17
Date of Sampling : 05.06.17
Analyst Started on : 07.06.17
Analyst Completed on : 07.06.17

Time	Concentration ($\mu\text{g}/\text{m}^3$)
09:45 AM to 05:45 PM	30.05

Limit: ($\mu\text{g}/\text{m}^3$) Ambient Air Quality standard (National)
O3-100 $\mu\text{g}/\text{m}^3$, 8 hours basis (Industrial, Residential, Rural & Other Area and Ecologically Sensitive Area)

Ref: National Ambient Air Quality Standards vide Central Pollution Control Board, New Delhi Notification dated 18th November 2009

For, Indicative Consultant India
Parbat Golui
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Kolkata Lab : B1-1/22/1-2, Santoshpur (M) Block-B, Maheshstala, Kol-700 142, Mob: 9434017584, 9836470938, 7797506970
Durgapur Office : C/o- M. Ghosh, D-28, Rahul Sankrityan Bithi, City Centre, Durgapur, Pin-713216, Mob. : 9232395890, 7797506971
Paradeep Office : C/o. Dhuna Chandra Setty Tannihara, Biloy Chandrapur, P.O.-Aulhara, Banka, P.S.-Paradeep, Dist.-Jagatsinghpur, Odisha, Mob.: 8116208984, 9830964194