



NABHA POWER LIMITED

Mailing Address: Aspire Tower, 4th floor, Plot No 55, Industrial and Business Park, Phase-I,
Chandigarh-160 002

Phone: 0172 4646846 • Fax: 0172 4646802

NPL/MoEF/EC/Jul/6298

Date: 12.07.2018

To,

The Director
Ministry of Environment, Forest and Climate Change
(Northern Region))
Bays Nos. 24-25, Sector 31-A,
Chandigarh-160030

[Handwritten signature]
17.7.18

Ref: Environmental Clearance No J-13011/44/2008- IA-II (T) dated 3rd October 2008 and as Amended on dated 15th November 2010.

Sub: Half Yearly Environment Clearance Compliance Report for the Period of Oct 2017 to Mar 2018.

Dear Sir,

Please find enclosed Half Yearly Environment Clearance Compliance Report of M/s Nabha Power Ltd., Vill. Nalash, Distt- Patiala(Punjab) for the period from 1st October 2017 to 31st March 2018.

Thanking You,

Yours Sincerely,

For Nabha Power Limited

[Handwritten signature]
(Rajiv Bhandari)
DGM-HSE

*received by
Indrajit
16/7/18*

प्राप्त किया/Received
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Min. of Environment, Forests & Climate Change
उत्तर क्षेत्रीय कार्यालय/Northern Regional Office
चण्डीगढ़/Chandigarh

Encl: As above.

Cc: (i) The Executive Environment Engineer, Regional Office, Patiala, Ground Floor, Vatavaran Bhawan, Nabha Road, Patiala.
(ii) In-charge-Central Pollution Control Board, Zonal Office (North) PICUP Bhawan Vibhuti Khand, Gomti Nagar, Lucknow (UP) - 226 010

Wholly Owned Subsidiary of L&T Power Development Limited
Corporate Office: L&T House, N M Marg, Ballard Estate, Mumbai-400 001
Regd office: PO Box No -28, Near Nalash, Rajpura-140401, Punjab
CIN No: U40102PB2007PLC031039

**SIX MONTHLY COMPLIANCE
REPORT OF ENVIRONMENTAL
CLEARANCE**

**NABHA POWER LIMITED
2×700 MW THERMAL POWER PLANT**



**VILL. NALASH
DISTT. PATIALA
(PUNJAB)**

Submitted to:

**MINISTRY OF ENVIRONMENT, FORESTS AND
CLIMATE CHANGE**

**Regional Office (Northern Region)
Chandigarh-160030**

**Central Pollution Control Board, Lucknow
Punjab State Pollution Control Board, Patiala**

Submitted By:
**NABHA POWER LIMITED
VILL. NALASH**

PATIALA (PUNJAB)

Period: October-2017 to March-2018

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Introduction

Nabha Power Limited (NPL), was established as Special Purpose Vehicle (SPV) by the erstwhile Punjab State Electricity Board (PSEB) to develop the Rajpura Thermal Power Project at a site near village Nalash, Distt Patiala, Punjab. An RfQ/RfP was floated by PSEB in line with the Case 2 competitive bidding guidelines, Govt of India (GoI) and L&T Power Development Limited (a wholly owned subsidiary of L&T) was identified as the lowest bidder. NPL has signed Power Purchase Agreement on 18th January, 2010 with PSEB and the NPL was also transferred to L&T Power Development Limited as its wholly owned subsidiary on 18th January, 2010.

The 1400 MW power plant is constructed as a unit configuration of 2 x 700 MW units, with one steam turbine and one boiler for each unit.

NPL is having two Pulverized Fuel Boilers, generating steam at 25.71MPa at 568 °C with two Condensing Turbo Generator Sets each having generating capacity of 700 MW of power. Installation of associated mechanical and electrical equipment, auxiliary units like coal, ash handling plant, water treatment plant, cooling water system, electrostatic precipitators (ESPs), NOx control equipment etc. are part of the total installation.

SALIENT FEATURES OF NABHA POWER LTD.

Total Capacity	2x700 MW (1400 MW)
Fuel Requirement and Source	5.7 MT/Year, SECL Mines
Water requirement and source	50 Cusec from Bhakra main canal
Status	Unit 1 Operational since 1 st Feb 2014
	Unit 2 Operational since 10 th July 2014

Project Proponent : Nabha Power Ltd.
Project Status : U # I & U#II Synchronised on Feb-2014 and July-2014 respectively
Reference : Ministry of Environment & Forest-
Environmental Clearance No.-J-13011/44/2008-IA-II (T) dated 3rd October 2008 and Amendment dated 15th November 2010.

COMPLIANCE REPORT FOR THE PERIOD OF Oct 2018 to Mar 2018

S. No.	MOEF Conditions	Compliance Status
1.	The total land requirement for the project shall be restricted to 1278 acres.	The land requirement for 1400 MW has been restricted within 1278 acres only.
2.	Prior clearance from the competent authority shall be obtained for locating the proposed power plant in proximity (about 3 kms) of the defence installation. A copy of the same shall be furnished to the ministry and the regional office of this ministry within one month from the date of issue of this clearance letter.	NOC from Ministry of defence & AAI obtained on 25 th May, 2009, Ref No.:No. 21(7)/2008/D(Coord) & 22 nd July, 2008, Ref No.: No. AAI/20012/664/ 2008-ARI (NOC) respectively.
3.	Sulphur & ash contents in the coal to be used in the project shall not exceed 0.5% & 34%.	Sulphur & ash contents in the coal being used are below 0.5% & 34%. Respectively. The Testing Reports are attached here as Annexure 1 & 2 .
4.	A bi-flue stack of height 275 m shall be provided with continuous online monitoring equipment for SOx, NOx & particulate matter. Exit velocity of flue gas should not be less than 25 m/sec.	Continuous online monitoring equipment are functional at 275 Mtr. stack on both the flues attached to Boiler 1 & Boiler 2 and monitoring of PM, Sox & Nox. is being done. The exit velocity of flue gas is measured and is more than 22 m/sec. The Stack Emission Monitoring Reports from MoEF & CC approved laboratory is attached here as Annexure-3 .
5.	High efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure particulate emission doesn't exceed 50 mg/m ³ .	The ESP's attached to Boiler 1 & 2 are functional and have efficiencies more than 99.99%. The SPM emissions are < 50 mg/Nm ³ . The stack Emission Monitoring Reports from MoEF & CC approved laboratory is attached here as Annexure-3
6.	Space provision shall be kept for retrofitting for FGD, if required at later date.	Space provision for FGD has already been earmarked
7.	Adequate dust extraction system such as cyclones/bag filters and water spray system in dusty areas such as coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	The Dust extraction system & Dust suppression system (water sprinklers) is operational in the coal handling area, ash handling and at all transfer points. The photographs of the same is attached here as Annexure-4
8.	Fly ash to be collected in dry form in storage facility (silos) shall be provided. 100% utilization of fly ash shall be achieved from day one. Unutilized fly ash in emergency and bottom ash shall be disposed in ash pond and bottom ash in conventional slurry mode. Mercury and other heavy metals (Hg, Cr, Pb etc.) will be monitored in bottom ash and fly ash as also in the effluent emanating from ash pond.	Fly Ash Silos (3 Nos.) are fully operational. The utilization report of Fly ash is being submitted with the Regional Office, PPCB on monthly basis. However, the same is attached here as Annexure-5 Monitoring of heavy metals is being done for both bottom & fly ash and reports are submitted with the Regional Office, MOEF & PPCB on 6 monthly basis. Latest reports are attached as Annexure-6 .
9.	Ash pond shall be lined with HDPE lining. Adequate safety measures shall also be implemented to protect ash dyke from getting breached.	Ash Pond bed is provided with HDPE lining (500 micron thick) over 50 mm thick sand cushion and top of HDPE liner is protected with 300 mm earth cover
10.	Closed cycle cooling system with cooling towers shall be provided. Effluents shall be treated as per the prescribed norms.	Complied.

NABHA POWER LTD

11.	The treated effluents confirming to the prescribed standard shall be re-circulated and reused within the plant. There shall be no discharge outside the plant boundary except during Monsoon. Arrangement shall be made that effluent & storm water do not get mix.	The Power plant is based on Zero Discharge (ZLD) concept and the treated effluents conforming to prescribed standards are being re- circulated and reused within the Plant. There is no discharge outside the plant boundary.
12.	A Sewage Treatment Plant shall be provided, and treated sewage shall be used for raising green belt/plantation.	The Sewage treatment plant of 50 KLD capacities is in operation. The treated water is being used for Green belt development/Plantation. The treated effluent report is attached as Annexure-7
13.	Rain water harvesting should be adopted. Central Ground Water Authority/board shall be consulted for finalization of appropriate rain water harvesting technology with in a period of three months from the date of clearance and details shall be furnished.	Rain water harvesting pits have been made as per the Rain water harvesting scheme approved by CGWA.
14.	Adequate safety measures shall be provided in plant area to check/minimize spontaneous fire in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry at Chandigarh.	The safety measures submitted to MOEF vide letter ref: NPL/SKN/MOEF/1423 dated: 28 th June 2012 have been implemented to check/minimize spontaneous fire in coal yard.
15.	Provision shall be made for the housing of construction labor 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 project.	Adequate arrangements were made for construction labor such as toilets, STP, safe drinking water, medical health care etc.
16.	Storage facilities for liquid fuel such as LDO and HFO/LSHS shall be made in the plant area where risk is minimum to the storage facilities. Onsite and off-site disaster management plan shall be prepared to meet any eventuality in case of an accident taking place. Mock drills shall be conducted regularly and based on the same, modification required, if any shall be incorporated in the DMP.	The Storage tanks for LDO & HFO storage have been made after necessary risk assessment. On site and off-site disaster management plan is prepared and the adequacy of the Plan is being tested on regular basis through conducting mock drills.
17.	Regular monitoring of ground water in and around ash pond area shall be carried out, records maintained and six-monthly reports shall be furnished to Regional Office, Chandigarh.	Regular monitoring is being done and reports are being submitted to MOEF & PPCB on six monthly basis. Latest reports are attached as Annexure-8
18.	A green belt of adequate width and density shall be developed around plant periphery covering about 1/3 rd of project area preferably with local species.	2.5 Lakh trees already planted @2500/ha with local species. The Green Belt Development Report is attached as Annexure-9
19.	Activities under CSR shall be enhanced with proper financial allocation. Details of these activities shall be submitted to the Regional Office of the Ministry, SPCB and the Ministry.	Rs. 4.41 crore has been spent during 2017-18 (End March 2018) against the set target of Rs.4.40 Crores. is attached as Annexure-10 .
20.	First aid & sanitation arrangement shall be made for the drivers and other contract workers during construction phase.	First aid centre & adequate sanitation arrangement for the drivers and other contract workers are in place.
21.	Noise level emanating from turbines shall be limited to 75 dB (A). For people working in the high noise area, requisite personal protective equipment like Earplug/ear muffs etc. shall be provided. Workers engaged in noisy area such as turbine area, air compressors etc. shall be periodically examined to maintain audiometry record and for any hearing loss including shifting to non-noisy/less noisy areas.	The Noise levels are maintained well below the prescribed standards. PPE's are being provided to all the workers depending upon the task being performed. Medical examination of the workers engaged in high noise area is being done on six monthly basis and records being maintained.

22.	Regular monitoring of ground level concentration of SO ₂ , NO _x , SPM, RSPM and Hg shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of the monitoring shall be decided in consultation with SPCB. Periodic report to be submitted to Regional office of this Ministry.	Monitoring reports are regularly being submitted to Regional office of Ministry and PPCB. Latest report are attached as Annexure-11
23.	The project proponent shall advertise in two local newspaper widely circulated in the region around the project, one of which shall be in the vernacular language of the locality/Municipal area/Gram Panchayat concerned and on the company's website within seven days from the date of clearance letter, informing that the project has been accorded environment clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at website of the ministry of Environment and forests at http://envfor.nic.in .	Complied.
24.	A separate Environment Management Cell with qualified staff to be set up for implementation of the stipulated environmental safeguards.	EMC comprising of qualified staff with adequate experience and knowledge is in place to cater environmental responsibilities.
25.	Half yearly report on status of implementation of the stipulated conditions and environmental safeguards shall be submitted to this Ministry/Regional Office/CPCB/SPCB.	Complied.
26.	Regional office of the Ministry of Environment & Forests located at Chandigarh will monitor implementation of stipulated conditions. A complete set of documents including EIA report & EMP report along with additional information submitted from time to time shall be forwarded to the regional office for their use during monitoring.	Complied.
27.	Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These cost shall be included as part of project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes & year wise expenditure should be reported to Ministry.	Being Complied
28.	The project authorities shall inform the regional office as well as the Ministry regarding the date of financial closure and final approval of project by concerned authorities and the dates of start of land development work and commissioning of plant.	Plant is in Operation and generation capacity is 1400 MW
29.	Full co-operation should be extended to the scientists/officers from the Ministry/Regional office of the Ministry at Chandigarh/the CPCB/the SPCB who would be monitoring compliance of environmental status.	The NPL is providing full co-operation to the scientists/officers from the Ministry/Regional office of the Ministry at Chandigarh/the CPCB/the SPCB who are monitoring compliance of environmental status, time to time.
30.	No additional coal consumption beyond 5.8 MTPA (at 85 % PLF) earlier envisaged for 2 x 660 MW and no additional land for the enhanced capacity shall be permitted.	Being Complied.

31.	The project proponent shall upload the status of compliance of the conditions stipulated in the environmental clearance issued vide Ministry's letter of even no. dated 03.10.2008, in its website and update periodically and also simultaneously send the same by email to regional office of Ministry of Environment and Forests.	NPL website is live & the compliance reports & Monthly Environment Monitoring Reports are uploaded periodically on website. Website address: http://www.Intnabhapower.com
32.	Critical pollutants levels including NO _x , RPSM ₁₀ and 2.5, SO ₂ shall be regularly monitored and results displayed in your website and also at main gate of the power plant.	Being Complied.

Reference: Ministry of Environment & Forest-Environmental Clearance No -J-13011/44/2008- IA-II (T) dated 3rd October 2008 and Amendment dated 15th November 2010. Validity Extension Dated 5.02.2014

S. No.	MOEF Conditions	Compliance Status
33	Harnessing solar power within the premises of the plant particularly at the available roof tops shall be under taken and status of implementation shall be submitted periodically to regional office of ministry	Solar panels on field hostel roof, Clarifier area and CHP are already provided.
34	A long-term study on radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute. Thereafter mechanism for an in-built continuous monitoring for radio-activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.	Radioactive and Heavy metal contents in Coal report is attached as Annexure-10
35	Exit velocity of flue gases shall not be less than 22 m/s. Mercury emissions from stack shall also be monitored on periodic basis.	The exit velocity of flue gases is more than 22 m/s. Mercury emissions from the stack is regularly monitored and the reports are being submitted to MOEF / PPCB on periodic basis. Latest report is attached as Annexure-3
36	Fugitive emissions shall be controlled to prevent impact on agriculture or non-agriculture land.	Adequate measures to control fugitive emissions already in place.
37	No ground water shall be extracted for use in operation of power plant even in lean season.	Complied.
38	Source sustainability of water requirement shall be carried out by an institute of repute. The study shall also specify the source of water for meeting the requirement during lean season. The report shall be submitted to the Regional Office of ministry within six months.	The Source Sustainability Study of water was conducted before granting the EC by MOEF to know the source of fulfilment of water requirement by the purposed Plant. For Nabha Power Limited the source of water is Bhakhra Canal and necessary permissions in this regard was taken from Irrigation Department, Punjab and was submitted with your kind office before grant of Environmental Clearance. When we had applied for Extn. of EC, our plant was already Commissioned, and we were having valid Consent to Operate from State Pollution Control Board. Therefore, the said condition is not applicable on us.
39	Hydro geological study of the area shall be reviewed annually and report submitted to the ministry. No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up/ operation of the power plant.	No Ground Water abstraction is being done. We are only using Canal water for generation of Power. Therefore, the said condition is not applicable on us.
40	Minimum required environment flow suggested by the competent authority of the state government shall be maintained in the Channel / Rivers (as applicable) even in lean season.	Agreed
41	C.O.C of 5.0 shall be adopted	Adopted and being complied.

42	Fly ash shall not be used for agricultural purpose. No mine void filling will be undertaken as an option for fly ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option for mine void filling is to be adopted, prior detailed study of soil characteristics of mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained by the State Pollution Control Board and implementation done in close coordination with the State Pollution Control Board	Agreed
43	Green belt consisting of 3 tiers of plantations of native species around the plant and at least 100m width shall be raised. Wherever 100m width is not feasible a 50 m width shall be raised and adequate justification shall be submitted to Ministry. Tree density shall not be less than 2500 per ha with survival rate not less than 75 %.	Complied. The Green Belt Development Report is attached as Annexure-9
44	Three tier green belt shall be developed all around ash pond over and above the green belt around the plant boundary.	Complied.
45	A common Green Endowment Fund shall be created and the interest earned out of it shall be used for the development and management of Green cover of the area.	NPL had spent 50 Lacs Approx on the maintenance of Green Belt and hired best consultant M/s Dr Green of this region.
46	The project proponent shall also adequately contribute in the development of the neighboring villages. Special package with implementation schedule for free potable drinking water supply in the nearby villages and schools shall be undertaken in a time bound manner.	<p>For villages</p> <ul style="list-style-type: none"> - NPL under the WB scheme helped building of 3 Overhead water tanks by providing margin funding for the villages share. State govt has already implemented scheme of Overhead tanks in all NPL catchment villages in Rajpura Distt. - RO water Purifiers have been installed in most of the villages by the state govt. <p>For schools</p> <ul style="list-style-type: none"> - All schools in NPL catchment area have drinking water facilities linked to OH tanks / deep Borewells. Since all schools have drinking water facilities, NPL provides need based support to schools for drinking water. <p>NPL emphasis is now on the development of educational institutions with focus on renovation & upgradation of Sports, Health & Sanitation through construction of Model Aganwaries / Class rooms, washroom, renovation of school/Aganwari buildings, cycle stands. Sports Ground/Tournament,</p>
47	An amount of Rs 22 Crores shall be earmarked as one time capital cost for CSR program. Subsequently a recurring expenditure of Rs 4.4 Crores per annum shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within one month along with the road map for implementation.	<p>NPL has spent Rs. 22 Cr till FY 2016-17. Subsequently NPL has spent the following amounts during subsequent years:</p> <ul style="list-style-type: none"> - 2017-18 : 4.41 cr - 2018-19 : 4.40 cr (proposed)
48	CSR scheme should address Public Hearing issues and shall be undertaken based on need based assessment in and around villages within 5.0 km of the site and in constant consultation with the village Panchayat and District administration. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall also be undertaken. Development of fodder farm, fruit bearing orchards, vocational training etc. can form a part of such program. Company shall provide separate budget for community development activities and income generating programs. Vocational training program for possible self-employment and jobs shall be imparted to identify villagers free of cost.	<p>Complied.</p> <p>Presently working in 49 villages (radius of 5 kms).</p> <ol style="list-style-type: none"> 1. All schemes are being implemented in the target villages in coordination with village panchayats. 2. Skill Training (Girls) – Being imparted free of cost through 11 vocational training centres. Courses being run include Beautician, Tailoring, and Embroidery. 3. Skill Training (Boys) - Advanced welding workshop has been setup in ITI Rajpura and also supported for upgradation of existing trades of Fitter and Mechanical.

		4. Local youth are being given preference for jobs in plant as per their skills, qualification and criteria set for the job.
49	It shall be ensured that in-built monitoring mechanism for the schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time.	In-built monitoring of schemes through a 5-member CSR committee chaired by Head O&M which meets quarterly to discuss and implement identified projects. Social Audit planned in June 2018
50	An Environmental cell shall be created at the project site itself and shall be headed by an officer of the company of appropriate seniority and qualification. It shall be ensured that the head of the cell shall directly report to the Head of the organization.	Environmental Cell Headed by DGM-HSE is already in place who directly reports to the Head of Organisation.
51	Regular monitoring of ground water level shall be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg, Cr, As, Pb) and records maintained and submitted to the Regional Office of this ministry. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.	Regular monitoring of ground water quality including heavy metals is being carried out regularly in and around the Ash Dykes. Piezometer wells are established around the ash pond area and being regularly monitored. Latest reports are attached as Annexure-8
52	Monitoring of the surface quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.	No Ground Water is being abstracted as we are using Canal water for generation of Power. The quality and quantity of the canal water is monitored, and records are being maintained. We are already monitoring Heavy metals in Ground Water by taking sample thru Piezometer and submitting the respective reports to Regional office of the ministry at Chandigarh. Latest reports are attached as Annexure-8
53	The environment 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 clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.	Complied. Last Environmental Report was submitted On 28.09.2017 with Regional Office of the Ministry at Chandigarh and PPCB, Patiala.
54	The project proponent shall formulate a well laid Corporate Environment Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental laws and regulations.	HSE Policy has been framed and accordingly officers have been designated for achieving the objectives by adherence to the Policy. We are certified for Integrated Management System requirements (ISO 9001, 14001 & 45001 & 50001)

Annexure-1

**Test Report of Sulphur % in
Coal**



TESTED & TRUSTED

RCA LABORATORIES

(A Division of Dr. Amin Controllers Pvt. Ltd.)

ISO/IEC 17025 - 2005 ACCREDITED LABORATORY

Chemical Lab : Kasba Industrial Estate 1
Unit No. P-27, Phase 1, 2nd Floor, Kolkata-700107
Tel. : +91-33-40253819 • Fax : +91-33-40253801
E-mail : kolkatalab@rcalabs.in
Website : www.rcalabs.in
CIN : U63090MH1975PTC18687

Test Certificate

Certificate No : DACPL/REPORT/CERTIFICATE/KMN/111/1819/0085
File No : KMN/1718/111

Certificate Date : 06/07/2018
Sample No. : 3492

NABHA POWER LIMITED.
PO Box No 28, Near village nalash, Rajpura,
Distt. Patiala

RAJPURA - 140301 INDIA

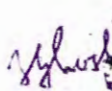
Kind Attn: MR. SANJEEV KUMAR JHA

Commodity : Coal [POWDER]
Sample Received From/ No. of samples : NABHA POWER LIMITED, RAJPURA /01
Sample Received on/ Lr.Ref : 03/07/2018
Quantity of Sample/Packing : 300 g/Plastic Bag
Seal No : NIL
Sample Type : Submitted Sample
Markings on the Letter/Label : FEED COAL DOS 08/03/2018
Date of Test Performance : 03/07/2018 to 06/07/2018

The above was analyzed as sought and results obtained are as follows:

Test Result

LAB CODES	SAMPLE DETAILS	TEST METHOD	S % (ADB)
3492	FEED COAL 2017-18 (Q4) DOS - 08/03/2018,	ISO : 334 - 2013	0.49


Mr. Buddhadeb Ghosh
Laboratory Manager, RCA Laboratories

Page 1 of 1

The results relate only to the item(s) tested above. Samples not drawn by us. The test report certificate shall not be reproduced except in full, without written approval of the laboratory

Head Office: 522, Milan Industrial
Estate, Athura, P.O. Bag 660
Green, Off. T.J. Rd., Mumbai - 33
Tel. : 2470 6275, 6524 7404 / 09
Telefax : 2470 6310
E-mail : laboratory@rcalaboratories.com
Website : www.rcalabs.in



ISSAI
APPROVED

Gafta
(APPROVED LABORATORY)

REV. 100
FOSFA
INTERNATIONAL
(ASSOCIATED ANALYST MEMBER)



(ACCREDITED LABORATORY)
(ISO/IEC 17025)
(CERTIFICATE NO.: TC-6187)

Laboratories also at
ISSAI (Mumbai, Kochi),
Chennai, Vishakhapatnam,
Mumbai & Paradip

12081

"This test has been performed to the best of our skills and abilities and is limited to the exercise of due care. This certificate which is issued on conditions stipulated overleaf, reflects our findings at the time and place of testing and does not relieve the parties concerned of their contractual obligations. Samples will be retained at our end for a period 90 days until instructed to the contrary prior to its disposal date."

Annexure-2

Test Report of Ash % in Coal

Annexure-2

Details of Average Ash Content in Coal in %

Month	Average Ash Content in Coal in %
Oct-17	33.84
Nov-17	32.23
Dec-17	30.09
Jan-18	30.10
Feb-18	30.21
Mar-18	29.16
Average Ash Content(%)	30.94

Annexure-3

**Stack Emission
Monitoring Results and
Photograph of
Continuous Emission
Monitoring System
(CEMS).**



Eco Laboratories & Consultants Pvt. Ltd.

NABL / MOEF / PPCB / HSPCB / BIS approved Laboratory

ISO - 9001 : 2015, 14001 : 2015 OHSAS-18001:2007

CIN : U74140PB2011PTC034739



TEST REPORT

Test Report No. : ELI21217GA002	ELI-12/1746-A	Page No. 1/2
Customer	Nabha Power Limited PO Box 28, Near Village-Nalash Distt Patiala, Rajpura-140101	
Work Order No. & Date	NPL/47000-04271 Dt: 23/08/2016	
Type of Sample	Stack Emission	
Mode of Collection of Sample	Sampling by laboratory	
Date of Sampling	11/12/2017	
Sampling Location	Boiler (Unit-1)	
Sampling Protocol	IS: 11255 (P-1) 1985 R-2003 and Customer's Requirements	
Date of Receipt of Sample	12/12/2017	
Period of Analysis	12/12/2017 to 14/12/2017	
Date of Reporting	16/12/2017	
Testing Protocol	EPA: GSR 176 (E), April 2, 1996	
Environmental Conditions	Clear Sky	

Source of emission	Stack attached to Boiler (Unit-1)
Identification/Make	MHI
Capacity	2322 TPH
Type of Fuel Used	Coal
Fuel Quantity/hour	340 ton/hr
APCD Details (If provided)	Electrostatic Precipitator & Cyclone
Stack Identification	Single
Stack Description (Shape & Material)	Circular and Metal
Diameter of Stack (m/inch))	7.5m
Sampling Port hole/Platform	Sampling done by standing on platform
Height of Stack from ground level (m)	275m
Height of Stack from nearest roof top (m)	190m
Stack Temperature (°C)	128
Sampling Time (Minutes)	43
Velocity (m/s)	22.8

Not Valid for Consent Purpose



PTO

ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

Tele/Fax: 0172-4616225 M: 9781303109 consulteco@yahoo.com ecolab@ecoparyavarani.org www.ecoparyavarani.org

RESULTS

S.No	Test Parameter	Unit	Result	Method
1	Particulate Matter (PM) at 12% CO ₂	mg/Nm ³	42	IS: 11255 (P-1) 1985
2	Sulphur Dioxide (SO ₂)	ppm	629	Lab SOP No. EL/SOP/SE/12, Issue No. & Issue Date 03 & 01.01.2016
3	Nitrogen Oxides (NO _x)	ppm	186	Lab SOP No. EL/SOP/SE/12, Issue No. & Issue Date 03 & 01.01.2016
4	Carbon Monoxide (CO)	ppm	3.0	Lab SOP No. EL/SOP/SE/12, Issue No. & Issue Date 03 & 01.01.2016
5	Mercury as Particulate Phase (HgP)	µg/m ³	<0.01	USEPA Method-29

Remarks (if any)

Not Valid for Consent Purpose



Lab Incharge

For Eco Laboratories & Consultants Pvt. Ltd.

Authorized Signatory





Eco Laboratories & Consultants Pvt. Ltd.

NABL / MOEF / PPCB / HSPCB / BIS approved Laboratory
ISO - 9001 : 2015, 14001 : 2015 OHSAS-18001:2007
CIN : U74140PB2011PTC034739



TEST REPORT

Test Report No. : EL121217GA003	ECO-14/1747-4	Page No. 1/2
Customer	Nabha Power Limited PO Box 28, Near Village-Nafash Distt Patiala, Rajpura-140101	
Work Order No. & Date	NPL/47000-04271 Dt: 23/08/2016	
Type of Sample	Stack Emission	
Mode of Collection of Sample	Sampling by laboratory	
Date of Sampling	11/12/2017	
Sampling Location	Boiler (Unit-2)	
Sampling Protocol	IS: 11255 (P-1) 1985 R-2003 and Customer's Requirements	
Date of Receipt of Sample	12/12/2017	
Period of Analysis	12/12/2017 to 14/12/2017	
Date of Reporting	16/12/2017	
Testing Protocol	EPA: GSR 176 (E), April 2, 1996	
Environmental Conditions	Clear Sky	

Source of emission	Stack attached to Boiler (Unit-2)
Identification/Make	MHI
Capacity	2322 TPH
Type of Fuel Used	Coal
Fuel Quantity/hour	340 ton/hr
APCD Details (If provided)	Electrostatic Precipitator & Cyclone
Stack Identification	Single
Stack Description (Shape & Material)	Circular and Metal
Diameter of Stack (m/inch))	7.5m
Sampling Port hole/Platform	Sampling done by standing on platform
Height of Stack from ground level (m)	275m
Height of Stack from nearest roof top (m)	190m
Stack Temperature (°C)	130
Sampling Time (Minutes)	40
Velocity (m/s)	22.6

Not Valid for Consent Purpose



PTO

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TeleFax: 0172-4616225 M: 9781303109 consulteco@yahoo.com ecolab@ecoparyavaran.org www.ecoparyavaran.org

RESULTS

S. No.	Test Parameter	Unit	Result	Method
1	Particulate Matter (PM) at 12% CO ₂	mg/Nm ³	48	IS: 11255 (P-1) 1985
2	Sulphur Dioxide (SO ₂)	ppm	596	Lab SOP No. EL/SOP/SE/12, Issue No. & Issue Date 03 & 01.01.2016
3	Nitrogen Oxides (NO _x)	ppm	191	Lab SOP No. EL/SOP/SE/12, Issue No. & Issue Date 03 & 01.01.2016
4	Carbon Monoxide (CO)	ppm	2.0	Lab SOP No. EL/SOP/SE/12, Issue No. & Issue Date 03 & 01.01.2016
5	Mercury as Particulate Phase (HgP)	µg/m ³	<0.01	USEPA Method-29

Remarks (if any)

Not Valid for Consent Purpose

Lab Incharge

For Eco Laboratories & Consultants Pvt. Ltd.

Authorized Signatory





Eco Laboratories & Consultants Pvt. Ltd.

NABL / MOEF / PPCB / HSPCB / BIS approved Laboratory

ISO - 9001 : 2015, 14001 : 2015 OHSAS-18001:2007

CIN : U74140PB2011PTC034739



ISO 9001:2015

PTB No. 10. Lab/3232/12
Valid till 30.09.2017

TEST REPORT

Test Report No.: EL239313GA001	EL-18-19/9817-4	Date of Issue: 30/03/2018	Page: 1 of 1
Customer Detail (Name & Address)	Nabha Power Limited PO Box 28 Near Village-Nalash Distt Patiala, Rajpura-140101		
Work Order No. & Date	NPL/47000-04271 DT. 23/08/2016		
Type of Sample	Stack Emission		
Mode of Sample Collection	Sampling by Laboratory		
Sampling Protocol	IS: 11255 (Pt-1) 1985 Reaff. 2003/CPCB Guidelines & Customer's Requirements		
Name of Sampling Source/Process	Boiler (Unit-I)		
Date of Sampling	26/03/2018		
Date of Sample Receipt	28/03/2018		
Sample Receipt No.	032899118		
Period of Analysis	28/03/2018 to 30/03/2018		
Testing Protocol	IS: 11255 (Pt-1) 1985 Reaff. 2003		
Stack Identification/ Make	MHI		
Capacity	2322 TPH		
Type of Fuel Used & Quantity	Coal		
Fuel Quantity/hour	340 ton/hr		
APCD Details (If provided)	Electrostatic Precipitator & Cyclone		
Stack Description (Shape & Material)	Single, Circular & Metal		
Diameter of Stack (m/feet/Inch/mm)	7.5m		
Sampling Port Hole/Platform	Permanent		
Height of Stack from ground level	275m		
Stack Temperature (°K)	428		
Stack Velocity (m/s)	22.3		
Sampling Time (Min)	24		

TEST RESULTS

S. No.	Test Parameter	Unit	Results	Standards	Test Method
1.	Particulate Matter (PM)	mg/Nm ³	44	50	IS:11255 (P-1): 1985
2.	Sulphur Dioxide as SO ₂	ppm	410	-	EL/SOP/SE/12
3.	Oxides of Nitrogen	ppm	216	-	EL/SOP/SE/12
4.	Carbon Monoxide (CO)	mg/Nm ³	8.16	-	EL/SOP/SE/12
5.	Mercury (Hg)	mg/Nm ³	BDL	0.03	USEPA Method-29

Remarks (if any): BDL Below Detection Level

Analyst/Lab In-charge
Not Valid for Consent Purpose
(Chemical)

Authorized Signatory (Chemical)

(Er. Sandeep Garg)
Managing Director

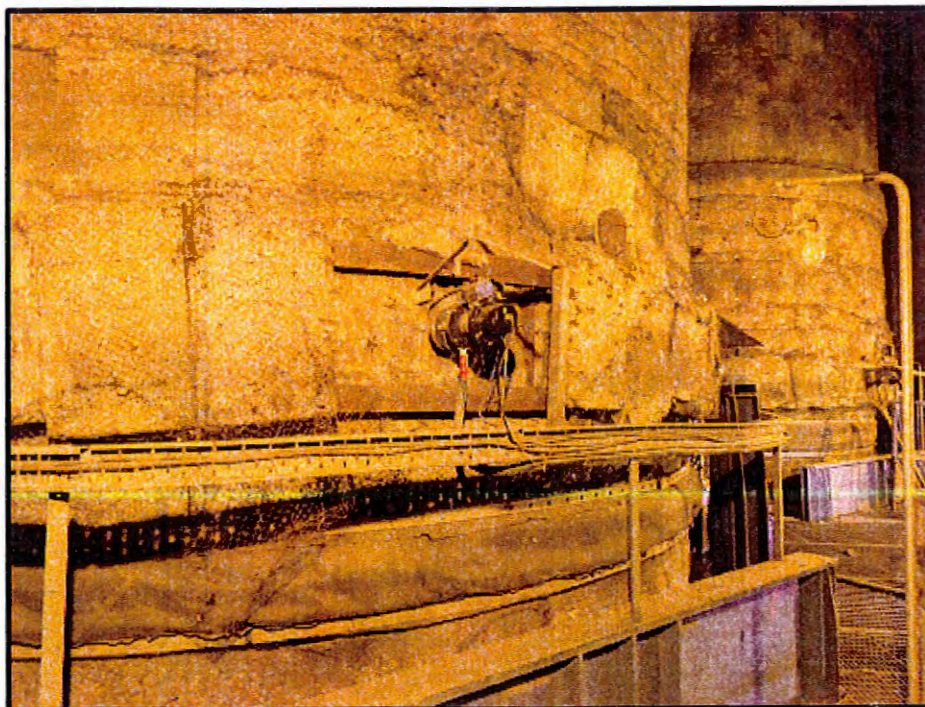
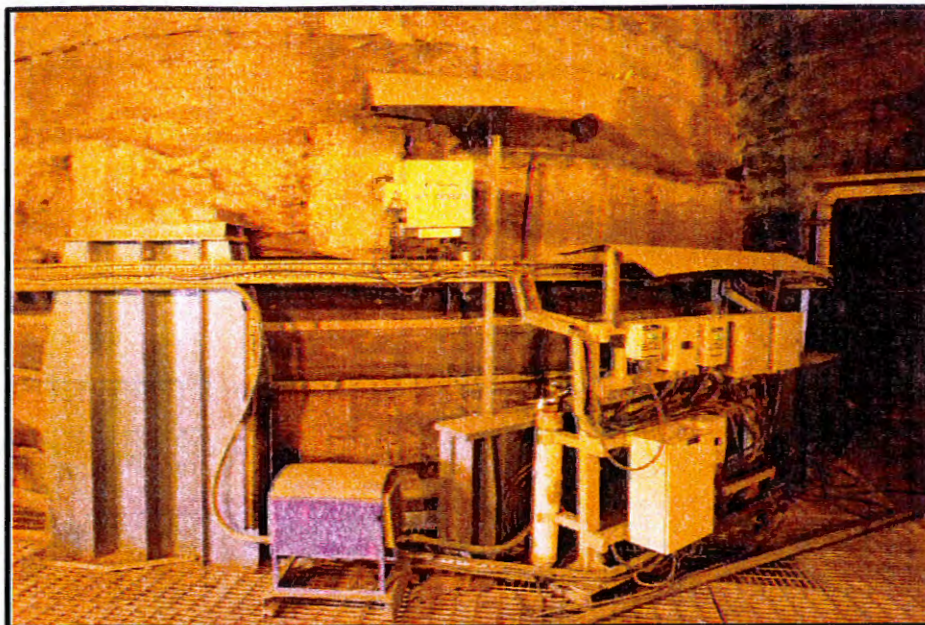
End of Report

PTO

ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

TeleFax: 0172-4616225 M: 9781303109 consulteco@yahoo.com ecolab@ecoparyavaran.org www.ecoparyavaran.org

Annexure-3



Continuous emission monitoring system installed at main stack for measurement of Particulate Matter & Gaseous Emissions.



Eco Laboratories & Consultants Pvt. Ltd.

NABL / MOEF / PPCB / HSPCB / BIS approved Laboratory

ISO - 9001 : 2015, 14001 : 2015 OHSAS-18001:2007

CIN : U74140PB2011PTC034739



PTO Ref No. 18/5238192
Dated 30/03/2018

TEST REPORT

Test Report No.: EL280318GA002	EL-18-17/9218-4	Date of Issue: 30/03/2018	Page: 1 of 1
Customer Detail (Name & Address)	Nabha Power Limited PO Box 28 Near Village-Nafash Distt Patiala, Rajpura-140101		
Work Order No. & Date	NPL/47000-04271 dt. 23/08/2016		
Type of Sample	Stack Emission		
Mode of Sample Collection	Sampling by Laboratory		
Sampling Protocol	IS: 11255 (Pt-1) 1985 Reaff. 2003/CPCB Guidelines & Customer's Requirements		
Name of Sampling Source/Process	Boiler (Unit-2)		
Date of Sampling	26/03/2018		
Date of Sample Receipt	28/03/2018		
Sample Receipt No.	032899018		
Period of Analysis	28/03/2018 to 30/03/2018		
Testing Protocol	IS: 11255 (Pt-1) 1985 Reaff. 2003		
Stack Identification/ Make	MHI		
Capacity	2322 TPH		
Type of Fuel Used & Quantity	Coal		
Fuel Quantity/hour	340 ton/hr		
APCD Details (If provided)	Electrostatic Precipitator & Cyclone		
Stack Description (Shape & Material)	Single, Circular & Metal		
Diameter of Stack (m/feet/Inch/mm)	7.5m		
Sampling Port Hole/Platform	Permanent		
Height of Stack from ground level	275m		
Stack Temperature (°K)	421		
Stack Velocity (m/s)	22.1		
Sampling Time (Min)	23		

TEST RESULTS

S. No.	Test Parameter	Unit	Results	Standards	Test Method
1.	Particulate Matter (PM)	mg/Nm ³	41	50	IS:11255 (P-1): 1985
2.	Sulphur Dioxide as SO ₂	ppm	441	-	EL/SOP/SE/12
3.	Oxides of Nitrogen	ppm	231	-	EL/SOP/SE/12
4.	Carbon Monoxide (CO)	mg/Nm ³	6.36	-	EL/SOP/SE/12
5.	Mercury (Hg)	mg/Nm ³	BDL	0.03	USEPA Method-29

Remarks (if any): BDL Below Detection Level

Analyst/Lab In-charge

Not Valid for Consent Purpose

(Chemical)

Authorized Signatory (Chemical)

(Er. Sandeep Garg)
Managing Director

End of Report

PTO

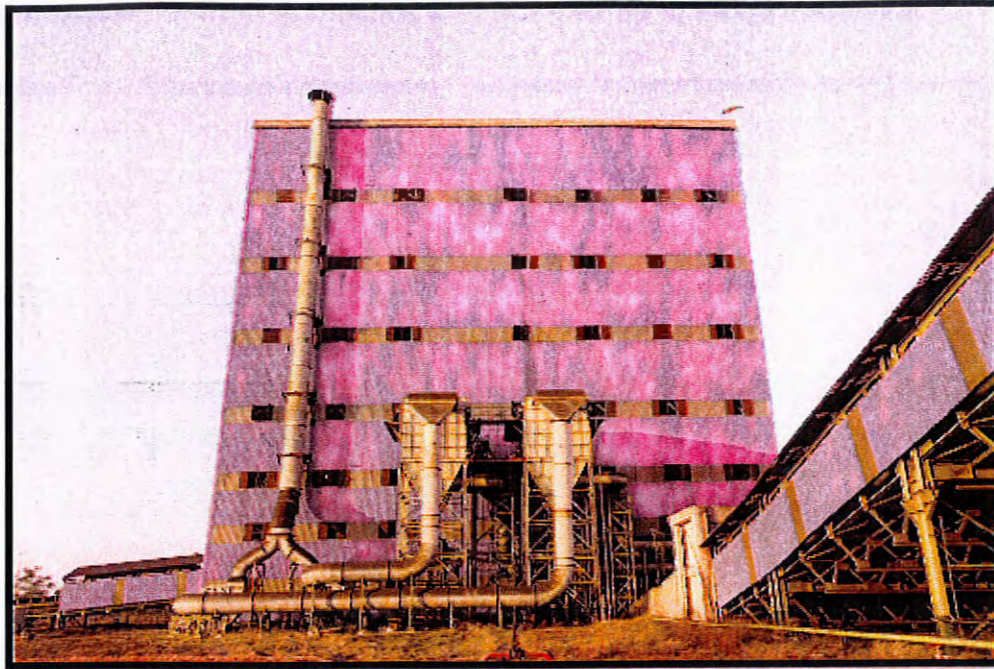
ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

TeleFax: 0172-4616225 M: 9781303109 consulteco@yahoo.com ecolab@ecoparyavaran.org www.ecoparyavaran.org

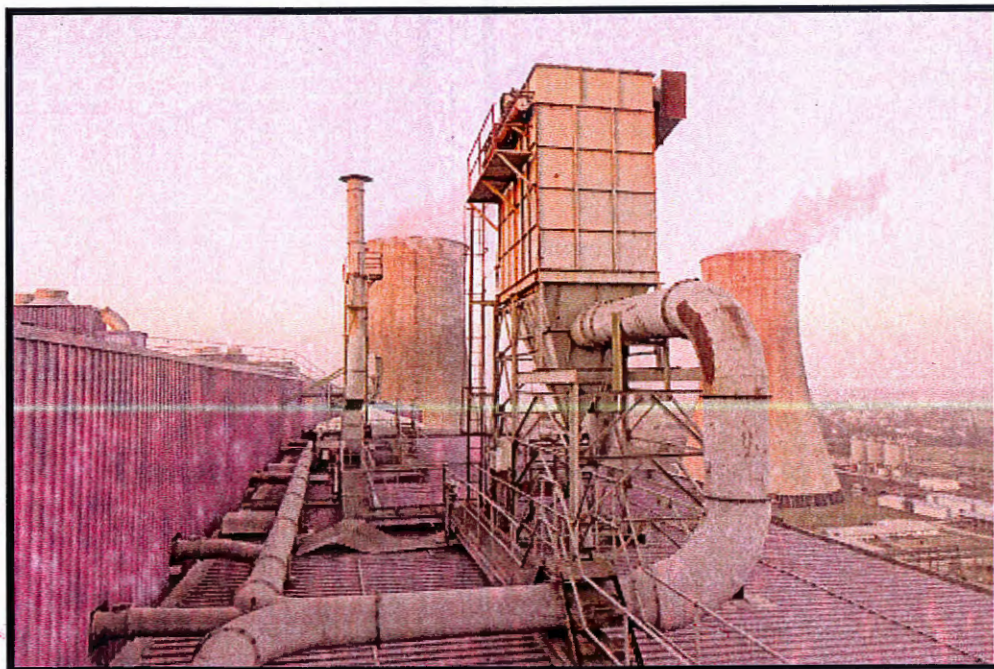
Annexure-4

**Measures taken to
control fugitive
emissions**

Annexure-4



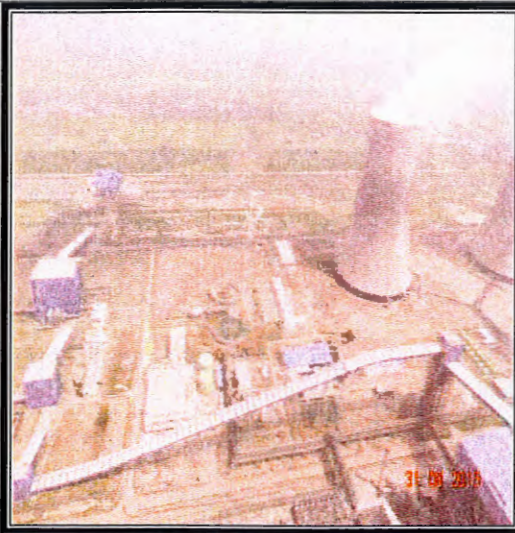
Dust Extraction System at Crusher House



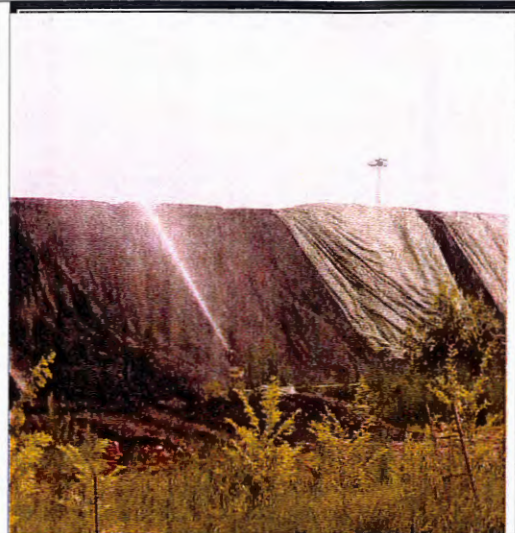
Dust Extraction System at Bunker

Annexure-4

1. Measures taken to control fugitive emissions during coal handling



Covered conveyors for transfer of coal from Wagon tippler to coal bunkers for abatement of fugitive emissions



Dust suppression (sprinkler system) provided at each coal stock pile to arrest Dust



Three side covered wind screen to control fugitive emissions due to wind flow



Automated and Mechanized Coal handling System to minimize manual operations

Annexure-5

Fly Ash Utilization Report

Nabha Power Ltd
Fly Ash Utilization FY 2017-18

Period	Month	Ash Generation Data (MT)				Ash Utilisation Data (MT)		Total Ash Utilised (MT)	%Ash utilised		Remark
		Dry Fly ash Collection	Wet Collection (Pond Ash)		Total	Dry Fly ash	Pond Ash		DFA	Total Ash	
			Bottom Ash	Dry Fly ash							
2017-2018	April	70234.44	6855.56	0	77190	70234.44	73959	144193.44	100%	185%	73959 MT pond ash is used for construction of NH-64
	May	111840.79	19989.21	0	131830	111840.79	41814	153654.79	100%	116%	41814 MT pond ash is used for construction of NH-64
	June	111811	7105	0	118916	111811	50745	162556	100%	136%	50745 MT pond ash is used for construction of NH-64
	July	125161.2	17553.97	15055	157770.45	108913.42	66760	175673	87%	123%	66760 MT pond ash is used for construction of NH-64
	Aug	104866	22863.9	15631	143360.9	106563.4	48042	154605.4	88%	107%	48042 MT pond ash is used for construction of NH-64
	Sept	99890.43	19599	0	119389.43	100074.29	40490	140564.29	100.00%	117%	40490 MT pond ash is used for construction of NH-64
	Oct	84322.95	13125.03	0	97947.99	84702.64	40062	124764.64	100%	127%	40062 MT Pond Ash in the month of Oct-2017 was used in the construction of NH-64(Zirakpur Patiala)
	Nov	104375	14533	0	119413	104864	7452	112316	100%	94%	7452 MT Pond Ash in the month of Nov. 2017 was used in the construction of NH-64(Zirakpur Patiala)
	Dec	105793	17296.47	0	123089.02	105791.6	600	106391.6	100%	86%	
	Jan	115841	13380	0	129220.58	114941.23	7222	122163.23	99%	95%	
	Feb	107854	12010	0	119864.58	108708.74	5980	114688.74	100.79%	96%	
	Mar	120645	19831	0	140476	120745.36	12959	133704.36	100.08%	95%	
	Total	1263435	184347	30686	1478468	1249194	396085	1645278	98.87	111.28	

Annexure-6

Fly Ash & Bottom Ash Analysis Report



Eco Laboratories & Consultants Pvt. Ltd.

NABL / MOEF / PPCB / HSPCB / BIS approved Laboratory

ISO - 9001 : 2015, 14001 : 2015 OHSAS-18001:2007

CIN : U74140PB2011PTC034739



TEST REPORT

PPCB-Ref. No. lab/3238092

Dated-30.09.2011

Test Report No.: EL260318GS002		EL-18-19/9821		Date of Issue: 16/04/2018	PageNo. 1/1
Customer		Nabha Power Ltd. P.O Box No. 28, Near Vill. Nalash Distt. Patiala, Rajpura, Punjab			
Work Order No. & Date		NPL/47000-04271 dt. 23/08/2016			
Type of Sample:		Bottom Ash			
Mode of Collection of Sample:		Sampling by Laboratory			
Packing, Marking, Seal & Quantity		Poly Bag Marked 'Bottom Ash' 1Kg			
Date of Sampling:		26/03/2018			
Sampling Location:		Ash Slurry Pump House			
Sample Receipt No.		032699318			
Date of Receipt of Sample:		26/03/2018			
Period of Analysis		26/03/2018 to 16/04/2018			
S.No	Test Parameters	Units	Results	Test Method	
1.	Lead (as Pb)	mg/kg	<0.5	EL/SOP/SS/23 based on 5.4, LATS/16/2002-03	
2.	Arsenic (as As)	mg/kg	<0.5	EL/SOP/SS/23 based on 5.6, LATS/16/2002-03	
3.	Total Chromium (as Cr)	mg/kg	<0.5	EL/SOP/SS/23 based on 5.4, LATS/16/2002-03	
4.	Mercury (as Hg)	mg/kg	<0.5	EL/SOP/SS/23 based on 5.7, LATS/16/2002-03	
5.	Alpha emitters*	Bq/cm ²	ND	APHA 22 nd . Edn. 7110B Followed by Radiation Counting System	
6.	Beta emitters*	Bq/cm ²	ND	APHA 22 nd . Edn. 7110B Followed by Radiation Counting System	
7.	Gama emitters*	Bq/cm ²	ND	APHA 22 nd . Edn. 7110B Followed by Radiation Counting System	

Remarks (if any) ND= Not Detected; *Subcontracted

Not Valid for Consent Purpose

Analyst/Lab In-charge

(Chemical)

Authorized Signatory (Chemical)

(Er. Sandeep Garg)
Managing Director

End of Report

PTO

ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

TeleFax: 0172-4616225. M: 9781303109 consulteco@yahoo.com ecolab@ecoparyavaran.org www.ecoparyavaran.org



Eco Laboratories & Consultants Pvt. Ltd.

NABL / MOEF / PPCB / HSPCB / BIS approved Laboratory

ISO - 9001 : 2015, 14001 : 2015 OHSAS-18001:2007

CIN : U74140PB2011PTC034739



PPCB-Ref. No. Lab/3238002
Dated-30.09.2011

TEST REPORT

Test Report No.: EL260318GS001		EL-18-19/9820		Date of Issue: 16/04/2018	Page No. 1/1
Customer		Nabha Power Ltd. P.O Box No. 28, Near Vill. Nalash Distt. Patiala, Rajpura, Punjab			
Work Order No. & Date		NPL/47000-04271 dt. 23/08/2016			
Type of Sample:		Fly Ash			
Mode of Collection of Sample:		Sampling by Laboratory			
Packing, Marking, Seal & Quantity		Poly Bag Marked 'Fly Ash' 1Kg			
Date of Sampling:		26/03/2018			
Sampling Location:		From Ash Silo			
Sample Receipt No.		032699418			
Date of Receipt of Sample:		26/03/2018			
Period of Analysis		26/03/2018 to 16/04/2018			
S.No	Test Parameters	Units	Results	Test Method	
8.	Lead (as Pb)	mg/kg	<0.5	EL/SOP/SS/23 based on 5.4, LATS/16/2002-03	
9.	Arsenic (as As)	mg/kg	<0.5	EL/SOP/SS/23 based on 5.6, LATS/16/2002-03	
10.	Total Chromium (as Cr)	mg/kg	<0.5	EL/SOP/SS/23 based on 5.4, LATS/16/2002-03	
11.	Mercury (as Hg)	mg/kg	<0.5	EL/SOP/SS/23 based on 5.7, LATS/16/2002-03	
12.	Alpha emitters*	Bq/cm ²	ND	APHA 22 nd . Edn. 7110B Followed by Radiation Counting System	
13.	Beta emitters*	Bq/cm ²	ND	APHA 22 nd . Edn. 7110B Followed by Radiation Counting System	
14.	Gama emitters*	Bq/cm ²	ND	APHA 22 nd . Edn. 7110B Followed by Radiation Counting System	

Remarks (if any) ND= Not Detected; *Subcontracted

Not Valid for Consent Purpose

Analyst/Lab In-charge

(Chemical)

Authorized Signatory (Chemical)

(Er. Sandeep Garg)
Managing Director

End of Report

PTO

ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

TeleFax: 0172-4616225 M: 9781303109 consulteco@yahoo.com ecolab@ecoparyavaran.org www.ecoparyavaran.org

Annexure-7

Treated Sewage Monitoring Results

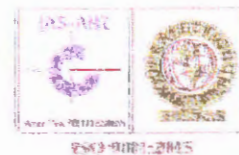


Eco Laboratories & Consultants Pvt. Ltd.

NABL / MOEF / PPCB / HSPCB / BIS approved Laboratory

ISO - 9001 : 2015, 14001 : 2015 OHSAS-18001:2007

CIN : U74140PB2011PTC034739



TEST REPORT

W/CA-263 (10% Lab/17.50%)
Dated 30.04.2018

Test Report No.: EL260318GE001	EL-18-19/19416-4	Date of Issue: 30/03/2018	Page: 1 of 1
Customer	Nabha Power Limited PO Box 28 Near Village-Nalash Distt Patiala , Rajpura-140101		
Work Order No. & Date	NPL/47000-04271 dt. 23/08/2016		
Type of Sample	Waste Water		
Mode of Sample Collection	Sampling by Laboratory		
Sampling Protocol	IS: 3025-(P-1)-1987-R-1998 Amdt-1		
Date of Sampling	26/03/2018		
Sampling Location/Source of sample	After Dual Filter (NDCT) (STP Outlet)		
Packing, Marking, Seal & Quantity	Plastic & Glass Bottle Marked 'M/26/01' 2litre + 1litre		
Date of Sample Receipt	26/03/2018		
Sample Receipt No.	032699518		
Period of Analysis	26/03/2018 to 30/03/2018		
Sample Condition/Observation	Turbid liquid with suspended & settleable impurities		
Testing Protocol	IS:3025 & APHA 22 nd Ed. 2012		

RESULTS

S. No.	Test Parameter	Units	Results	Standards	Test Method
1	pH	--	7.66	5.5to9.0	APHA 22 nd Ed. 2012-4500B
2	Total Dissolved Solids	mg/l	250	2100	APHA 22 nd Ed. 2012-2540C
3	Total Suspended Solids	mg/l	7	100	APHA 22 nd Ed. 2012-2540D
6	Biochemical Oxygen Demand (3 days@27°C)	mg/l	8	30	IS 3025(Part 44) :1993 (RA 1999)
7	Chemical Oxygen Demand	mg/l	33	250	APHA 22 nd Ed. 2012-5220D
8	Oil & Grease	mg/l	BDL	10	APHA 22 nd Ed. 2012-5520D

Remarks (if any):BDL Below Detection Level

Analyst/Lab In-charge

Not Valid for Consent Purpose
(Chemical)

Authorized Signatory (Chemical)

(Er. Sandeep Garg)
Managing Director

End of Report

PTO

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TeleFax: 0172-4616225 M: 9781303109 consulteco@yahoo.com ecolab@ecoparyavaram.org www.ecoparyavaram.org

Annexure-8

Ground Water Quality Monitoring Results



Sophisticated Analytical Instruments Laboratories

Society (Registered as Society with Registrar of Firms & Societies, Punjab, Chandigarh)

Thapar Technology Campus, Bhadson Road, Patiala-147 004 (India)

TEST REPORT

Test Report No.	W(S)/17-18/145	Date.	27.02.2018	Serial No.	147
Service No.	W(S)/17-18/145 (01-04)	Customer's Ref.	Sample submitted by customer dtd 19.02.2018		
Customer's name and address.					
M/s Nabha Power Limited Post Box 28, Near Village Nalash Distt. Patiala 140401, Punjab Kind attn: Mr. Himanshu Verma					
Sample Description		Ground Water			
Condition of the sample received		O K			
Customer's sample identification No. (if any)		01- Piezometer well No.1 (Near coal handling plant) 02- Piezometer well No 2 (Near storm water sump) 03- Piezometer well No.3 (Along the ash dyke) 04- Piezometer well No.4 (Between ash dyke & reservoir)			
Quantity/number of samples		Four			
Test parameters		pH, TSS, TDS, COD, BOD, Total Hardness, Mercury, Lead, Chromium			
Standard/Specification/Method followed		APHA 23 rd Edn. IS: 3025			
Deviations (if any)		--			
Documents constituting this report (if any)		--			
Date of Receipt of Job		Date of Completion of Job		Total Number of Pages	
19.02.2018		27.02.2018		1	

TEST RESULTS

S. No.	Parameters	Test Method	Unit	Results			
				01 (Near Coal Handling Plant)	02 (Near Storm Water Sump)	03 (Along the ash dyke)	04 (Between ash dyke & Reservoir)
1	pH	APHA 23 rd Edn. 4500-H+B	--	7.8	7.8	7.8	7.1
2	Total Suspended Solid	APHA 23 rd Edn. 2540-D	mg/l	<10	<10	<10	<10
3	Total Dissolved Solid (TDS)	APHA 23 rd Edn. 2540-C	mg/l	442	436	454	664
4	Chemical Oxygen Demand (COD)	APHA 23 rd Edn. 5220B	mg/l	<5.0	<5.0	<5.0	<5.0
5	Biochemical Oxygen Demand for 3 days at 27°C	IS: 3025 (Part 44)-1993, Reaffirmed May, 2009	mg/l	<5.0	<5.0	<5.0	<5.0
6	Total Hardness as CaCO ₃	APHA 23 rd Edn. 2340 C	mg/l	9.3	Nil	12.2	275
7	Mercury as Hg	APHA 23 rd Edn. 3112 B	mg/l	Not detected	Not detected	Not detected	Not detected
8	Lead as Pb	APHA 23 rd Edn. 3111 B	mg/l	Not detected	Not detected	Not detected	Not detected
9	Chromium as Cr	APHA 23 rd Edn. 3500 B	mg/l	Not detected	Not detected	Not detected	Not detected

.....end of report.....

S. Chandra

Head, SAI Labs

(Authorized Signatory)

- Note:
1. The results listed refer only to the tested samples and applicable parameters. Endorsement of products is neither inferred nor implied.
 2. Samples will be destroyed after one month from the date of issue of the test report unless otherwise specified.
 3. This report is not to be reproduced wholly or in part and cannot be used as an evidence in the products is neither inferred nor implied.
 4. In case any reconfirmation of contents of the test report is required, please contact the authorized signatory of the test report within 15 days of the issue of test report.

Annexure-9

Green Belt Photographs

Annexure-9

Extensive plantation in and around the plant-

NPL is having a complete dedicated team of skilled horticulturists for the forestation and greenery development program at our plant. A green belt of 2.50 lac plants is developed inside as well outside plant premises. Also small patches of gardens are developed inside of the plant premises wherever the open space is available to improve the plant beautification.



Pic-1 Green belt around coal stock pile



Pic-2 Green belt in plant premises



Pic-3 Green belt along boundary



Pic-4 Green belt Railway siding area

Annexure-9

Green Belt Photographs

Annexure-10

CSR Report

**Corporate Social Responsibility
Oct-17 to Mar-18**

Nabha Power Limited

CSR Spent-2017-18 till March/18

Themes	Budget Spent
Rural Development	1,64,61,043
Education & Sports	1,52,97,754
Skill Building	27,69,000
Health & Environment	23,51,835
Water & Sanitation	8,30,000.00
Girls Welfare	64,04,000
Total	4,41,13,632

Activities During October-2017

(Stubble Collection/Bailing)



To prevent Stubble burning , NPL initiated recycling of stubble in association with Energy Harvest.

Collection of stubble from fields which further converted in pallets as source of fuel for different purpose.

300 acre of land from 7 villages has been covered under the pilot project.


The image block contains three vertically stacked photographs. The top photo shows a single-story yellow building with a flat roof and a few windows, situated in an open area with trees in the background. The middle photo shows a large, rectangular area paved with reddish-brown bricks, with a few people standing in the distance. The bottom photo shows a dirt path or road with several people walking along it, with trees and a building visible in the background.

Development of Aganwaries/Schools

Village	Work
Aganwari Centre, Chak Kalan	Flooring, Whitewash
Aganwari Centre, Chak Khurd	Boundary Wall, Flooring, Whitewash
Govt. School, Bhagrana	Pathway
Badal Colony	Yet to Start
Mirzapur	Yet to Start
Bakhshiwala B	Yet to Start

Road Construction

Village	Length
Wazirabad	600 mtr
Dabali Kalan	400 mtr
Bhappal	300 mtr
Haripur-Sural Khurd	300 mtr



Exposure Event

- Two days "Menhdi Art" program organized at village Niamatpur on the occasion of "Karwa Choth".
- Students attended 35 customers from the near by areas who appreciated their skills.
- Got opportunity to learn customer dealing skills, to know customer demand and earning livelihood.
- NPL made necessary sitting arrangements, tent, lunch for the students.

Footprint – Enhancing Expanding Girls Skill Training Opportunities



Old Location	New Location	Shifted
Nalash Kalan	Bhateri	Oct/17

Activities During the November-2017



Development of Aganwaries/Schools

Village	Work
Aganwari Centre, Chak Kalan	Flooring, Whitewash
Aganwari Centre, Chak Khurd	Boundary Wall, Flooring, Whitewash
Govt. School, Bhagrana	Pathway
Badal Colony	Renovation of room (Plastering, Flooring, Door/window/Electricity)
Mirzapur	Washroom/Flooring/window/gate
Govt. School, Kharola	Roof treatment, Pathway
Govt School Urna	Roof treatment, Pathway
Aganwari Center, Urna	Yet to start
Bakhshiwal B	Yet to Start

Development of Aganwaries/Schools

Now



Chak Kalan Aganwari Center

Work under taken:-

- Flooring
- Washroom
- Whitewash

Earlier



Road Construction

Village	Length	Status
Wazirabad	600 mtr	Completed
Dabali Kalan	400 mtr	Completed
Bhappal	300 mtr	Completed
Haripur-Sural Khurd	300 mtr	In Process



2nd NPL CUP

Date:- 24th Nov-2017 Venue:- Village Dhumma



Nabha Power Limited organised 2nd Rural Sports tournament at village Dhuman. In this tournament teams from 50 surrounding villages of plant site had participated in Kabbadi, Volleyball and Tug of War. As a special event, Girls Kabaddi and Basket Ball show matches were also held.



Footprint – Enhancing Expanding Girls Skill Training Opportunities



Old Location	New Location	Shifted
Harna	Salempur	Nov/17

NPL Welfare Schemes

Scheme	Families Supported	Amount Disbursed	Village Covered
Shagan Scheme	20	4.20 Lacs	14
Female Child Scheme	22	4.62 Lacs	16

<p style="text-align: center;">Volleyball Kits (Pole/Net/Balls)</p>	
	
<p style="text-align: center;">Salempur/29-11-17 13 Youth clubs/villages</p>	<p style="text-align: center;">Niamatpur/30-11-17 06 Youth clubs/villages</p>

Activities During December-2017

Nabha Power demonstrates Paddy Straw Project Utilizing Paddy Straw and Promoting Entrepreneurship



On 15th December 2017 ,The pelletization plant was inaugurated by the Honourable Minister of Power and Irrigation (Punjab), Mr. Rana Gurjit Singh in presence of the British Deputy High Commissioner in Chandigarh Mr. Andrew Ayre.

NPL Welfare Schemes



Scheme	Families Supported	Amount Disbursed	Village Covered
Shagan Scheme	26	5.46 lacs	18
Female Child Scheme	Nil	Nil	Nil



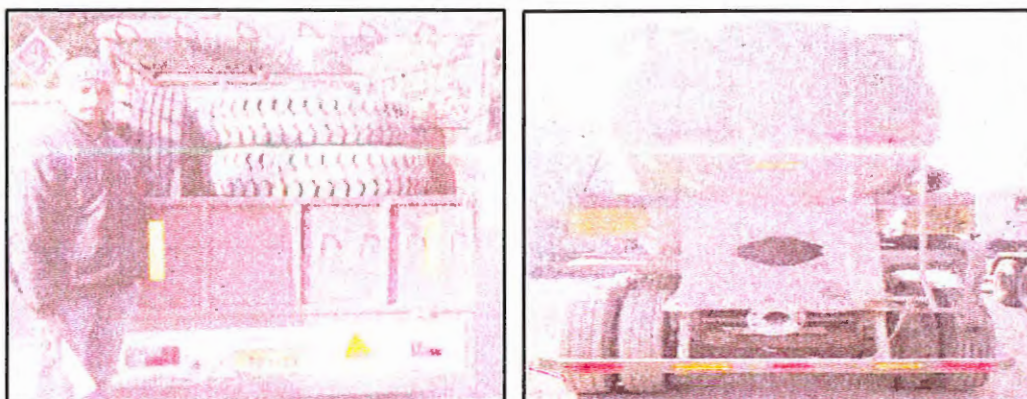
Activities During January-2018

Girl Child's Lohri Celebration



To honor the birth of "Girl Child " NPL celebrated Girls Lohri at village Uppal Her. Mr. Athar Shahab CE NPL inaugurated the program and briefed about the NPL's various CSR initiatives especially for the upliftment of the Girls. During the program NPL distributed FDs and Shagan cheques to the Girls beneficiaries under NPL Welfare schemes.

Road Safety Drive



On 9th Jan 2018 NPL carried out Road Safety drive at four identified locations - Petrol pump near Jansui, Mirzapur road junction, , Village Nalash, and one at NPL main Gate. Vehicles without tail lights / reflectors, Horse Cart, Tricycle, Tractor-Trolley, Cycles etc were targeted with pasting of reflective stickers.

Meeting with ITI Officials & Rajpura based Industrialists



On 16th Jan an interaction meeting held with Rajpura based entrepreneurs and Govt ITI Officials . Agenda was to enhance the utilization of Welding work being set up by NPL, introducing short term courses for the local industrial welders.

Road & Drain Construction



Work to be done	Villages	DOS	DOC
<ul style="list-style-type: none"> • Concrete Road • Drain • Ease of Slop (Under pass) 	<ul style="list-style-type: none"> • Niamatpur • Dadu Majra • Underpass (Sural Khurd- Harna 	23 Jan	31 March

Community Place



Work to be done	Villages	DOS	DOC
<ul style="list-style-type: none"> Area:- 30 mtr x 50 mtr Fencing up 6 feet height Gate with Pillars Interlock tiling Stage Washroom 	<ul style="list-style-type: none"> Mangpur Gurditpura Cholti Kheri Badali Mai Ki 	14 th Jan	31 th Mar

Education- School & Aganwari



Work to be done	Villages	DOS	DOC
<ul style="list-style-type: none"> School Class Rooms Aganwari Centers Washrooms Renovation 	<ul style="list-style-type: none"> Jansua Kotla Dhumma LohaKheri Badali Mai Ki Sarai Banjara Bakhshiwala 	12 th Jan	31 th Mar

SHG Meeting



Mr. Rakesh Goyal District Manager Cooperative Bank Fatehgarh Sahib conducted a meeting with Training Centers beneficiaries at Bhagrana and Salempur. The purpose of the meeting was to engage them in SHG and linkage with Bank to start a group based income generating activity.

Support under Welfare Schemes



Scheme	Families Supported	Amount Disbursed	Village Covered
Shagan Scheme	18	3.78 lacs	12
Female Child Scheme	20	4.20 lacs	17



Education



School	Aganwari	School Cycle Stand
1. Badali Mai Ki	1. Jansua	1. Badali Mai Ki
2. Sarai Banjara	2. Kotla	2. Uppal Heri
3. Bakhshiwala	3. Dhumma	3. Mirzapur
4. LohaKheri		4. Dhumma
		5. Bhappal
		6. Ugani
		7. Basantpura
		8. Chandu Majra
		9. Dadu Majra

Road & Drain



Work to be done	Villages	DOS	DOC
<ul style="list-style-type: none"> Concrete Road Drain Ease of Slop (Under pass) 	<ul style="list-style-type: none"> Niamatpur Dadu Majra Bakhshiwala Underpass (Sural Khurd-Harna) 	23 Jan	31 March

Health



Work to be done	Village	DOS	DOC
<ul style="list-style-type: none"> • Additional Room • Tile Flooring • Gate with Pillars • Interlock Pathway • Door & windows • Washroom • Whitewash 	<ul style="list-style-type: none"> • SHC Kotla 		31 st Mar

Upgradation of Subsidiary Health Centre Kotla

Community Place

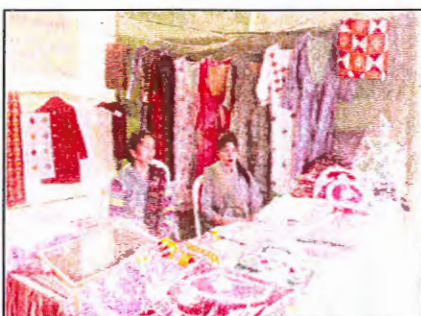


Work to be done	Villages	DOS	DOC
<ul style="list-style-type: none"> • Area:- 30 mtr x 50 mtr • Fencing up 6 feet height • Gate with Pillars • Interlock tiling • Stage • Washroom 	<ul style="list-style-type: none"> • Mangpur • Gurditpura • Cholti Kheri • Badali Mai Ki 	14 th Jan	31 th Mar

Participation in Regional Saras Fair



Training Centers participated in 12 days Regional Saras Fair at Patiala, organized by Govt. of Punjab and Ministry of Rural Development, Govt. of India. In this fair artisans from across the country participated and displayed their local handicraft items. It was a good platform for our Training centers to get exposure about different kind of handicraft items and also to learn marketing skills.



21st Feb to 04th Mar 2018

Sheesh Mahal Patiala

SHG Meeting-03-Feb-18



Mr. Bhaskar Kataria District Manager Cooperative Bank Patiala conducted a meeting with SHG Beneficiaries at village Rangian. He shared various opportunities available for SHGs to engage in group based income generating activity.



Support under Welfare Schemes



Scheme	Families Supported	Amount Disbursed	Village Covered
Shagan Scheme	33	6.93	14
Female Child Scheme	5	1.05	3



Activities During February-2018

Education



School	Aganwari	School Cycle Stand
1. Badali Mai Ki	1. Jansua	1. Badali Mai Ki
2. Sarai Banjara	2. Kotla	2. Uppal Heri
3. Bakhshiwala	3. Dhumma	3. Mirzapur
4. LohaKheri		4. Dhumma
		5. Bhappal
		6. Ugani
		7. Basantpura
		8. Chandu Majra
		9. Dadu Majra

Road & Drain



Work to be done	Villages	DOS	DOC
<ul style="list-style-type: none"> Concrete Road Drain Ease of Slop (Under pass) 	<ul style="list-style-type: none"> Niamatpur Dadu Majra Bakhshiwala Underpass (Sural Khurd-Harna) 	23 Jan	31 March

Health



Work to be done	Village	DOS	DOC
<ul style="list-style-type: none"> • Additional Room • Tile Flooring • Gate with Pillars • Interlock Pathway • Door & windows • Washroom • Whitewash 	<ul style="list-style-type: none"> • SHC Kotla 		31 st Mar

Upgradation of Subsidiary Health Centre Kotla

Community Place



Work to be done	Villages	DOS	DOC
<ul style="list-style-type: none"> • Area:- 30 mtr x 50 mtr • Fencing up 6 feet height • Gate with Pillars • Interlock tiling • Stage • Washroom 	<ul style="list-style-type: none"> • Mangpur • Gurditpura • Cholti Kheri • Badali Mai Ki 	14 th Jan	31 th Mar

Support under Welfare Schemes



Scheme	Families Supported	Amount Disbursed	Village Covered
Shagan Scheme	33	6.93	14
Female Child Scheme	5	1.05	3

3rd NPL Cup

- 60 Teams
- Best arrangements-
Stage/Ground/Langar/Large gathering
- Publicity :- WhatsApp/Facebook/Poster/Banner

Winners

Event	1st	2nd	3rd
Kabaddi	Chak Khurd	Bakhshiwala	Nalash Kalan
Volley Ball	Bhagrana	Dadu Majra	Ugani Sahib
Rassa Kashi	Sindhuran	Bhagrana	Salempur



Participation in Regional Saras Fair



Training Centers participated in 12 days Regional Saras Fair at Patiala, organized by Govt. of Punjab and Ministry of Rural Development, Govt. of India. In this fair artisans from across the country participated and displayed their local handicrafts items. It was good platform for our Training centers to get exposure about different kind of handicraft items and also to learn marketing skills.



21st Feb to 04th Mar 2018

Sheesh Mahal Patiala

SHG Meeting-03-Feb-18



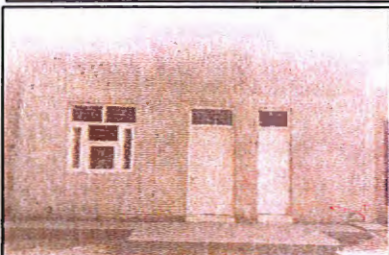
Mr. Bhaskar Kataria District Manager Cooperative Bank Patiala conducted a meeting with SHG Beneficiaries at village Rangian. He shared various opportunities available for SHGs to engage in group based income generating activity.



International Women Day



Place:- Training Center Uppal Heri

Date:- 8th March 2018

Education

School	Work description	Amount (In Lacs)
Loha Kheri	Two class rooms	7.42
Sarai Banjara	Class and Washroom	6.7
Bakshiwala	Renovation of Kithchen New Washroom	4.34
Badali Mai Ki	Washroom	1.38
Total		19.84
Aganwari	Work discription	Amount (In Lacs)
Jansua	New Aganwari	5.44
Kotla	New Aganwari	5.44
Dhumma	Renovation of existing Aganwari	3.69
Total		14.57
Cycle Stand Shed	Work description	Amount (In Lacs)
Badali Mai Ki	Shed, stand, interlock flooring	3.8
Uppal Heri	" " " "	1.9
Mirzapur	" " " "	1.9
Dhumma	" " " "	1.9
Bhappal	" " " "	1.9
Ugani	" " " "	1.9
Basatpura	" " " "	1.9
Chandu Majra	" " " "	1.9
Dadu Majra	" " " "	1.9
Total		19

Road & Drain work

Village	Work Description	Amount (In Lacs)
Niamatpur	Concrete Road and Drain	19.14
Dadu Majra	Concrete and Bitumen Road	14.89
Bakhsiwala	Drain and Pathway	9.53
Railway Under Pass	Concrete road, Pump Room	13.15



Niamatpur/Completed



Dadu Majra/In Progress

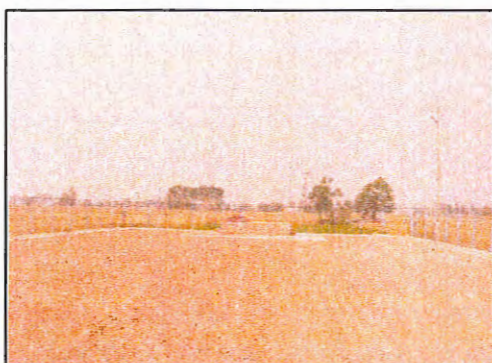
Health



Subsidiary Health Center	Work description	Amount (In Lacs)
Kotla	Additional Room Tile Flooring Gate with Pillars Interlock Pathway Door & windows Washroom Whitewash	20.88

Community Place

Community Place	Work discription	Amount (In Lacs)
Mangpur	Area:- 30 mtr x 50 mtr	11.60
Gurditpura	Fencing up 6 feet height	11.01
Cholti Kheri	Gate with Pillars	10.58
Badali Mai Ki	Interlock tiling	10.58
	Stage	
	Washroom	



Support under Welfare Schemes



Scheme	Families Supported	Amount Disbursed	Village Covered
Shagan Scheme	23	4.83	17
Female Child Scheme	4	0.84	3

Thank you !

Annexure-11

Ambient Air Quality Monitoring Results



Eco Laboratories & Consultants Pvt. Ltd.

NABL / MOEF / PPCB / HSPCB / BIS approved Laboratory

ISO - 9001 : 2015, 14001 : 2015 OHSAS-18001:2007

CIN : U74140PB2011PTC034739



PPCB-Ref. No. Lab/3233392

Dated-30.09.2011

TEST REPORT

Test Report No.: EL280318GA004 <i>EL-18-19/9866</i>		Page No. 1/1
Customer Detail (Name & Address)	Nabha Power Limited PO Box 28 Near Village-Nalash Distt Patiala , Rajpura-140101	
Work Order No. & Date	NPL/47000-04271 DT. 23/08/2016	
Type of Sample	Ambient Air	
Sampling Protocol	IS: 5182 (P-14) 2000/CPCB Guidelines & Customer's Requirements	
Mode of Collection of Sample	Sampling by Laboratory	
Name of Sampling Location	Vill. Dabhali,Rajpura	
Date of Sampling	27/03/2018 to 28/03/2018	
Date of Sample Receipt	28/03/2018	
Sample Receipt No.	032898818	
Period of Analysis	28/03/2018 to 30/03/2018	
Date of Reporting	30/03/2018	
Testing Protocol	NAAQS 2009	

TEST RESULTS

S. No.	Test Parameter	Unit	Results	NAAQ Standard 2009	Test Method
1.	RSPM (PM ₁₀)	µg/m ³	78	100	IS:5182 (Pt-23)
2.	FPM (PM _{2.5})	µg/m ³	39	60	EL/SOP/AAQ/01
3.	Sulphur Dioxide (SO ₂)	µg/m ³	7.7	80	IS:5182 (Pt-2)
4.	Nitrogen Dioxide (NO ₂)	µg/m ³	16	80	IS:5182 (P-6)
5.	Ammonia (NH ₃)	µg/m ³	30	400	EL/SOP/AAQ/02
6.	Ozone (O ₃)	µg/m ³	17	180	IS:5182 (Pt-9)
7.	Carbon Monoxide (CO)	mg/m ³	BDL(MDL1.5)	04	EL/SOP/AAQ/03
8.	Lead (Pb)	µg/m ³	BDL(MDL0.04)	1.0	IS:5182 (Pt-22)
9.	Arsenic (As)	ng/m ³	BDL(MDL1)	06	EL/SOP/AAQ/04
10.	Nickel (Ni)	ng/m ³	BDL(MDL10)	20	EL/SOP/AAQ/04
11.	Benzene (C ₆ H ₆)	µg/m ³	BDL(MDL 2)	05	IS:5182 (Pt-11)
12.	Benzo(a)pyrene (BaP)	ng/m ³	BDL(MDL0.5)	01	IS:5182 (Pt-12)

Note: BDL-Below Detection Level; MDL-Method Detection Level

Not Valid for Consent Purpose

Analyst/Lab In-charge

(Chemical)

Authorized Signatory (Chemical)

(*Ex. Sandeep Garg*)
Managing Director

End of Report

PTO



Eco Laboratories & Consultants Pvt. Ltd.

NABL / MOEF / PPCB / HSPCB / BIS approved Laboratory

ISO - 9001 : 2015, 14001 : 2015 OHSAS-18001:2007

CIN : U74140PB2011PTC034739



TEST REPORT

Test Report No.: EL280318GA010 <i>EL-19/9872</i>		Page No. 1/1
Customer Detail (Name & Address)	Nabha Power Limited PO Box 28 Near Village-Nalash Distt Patiala , Rajpura-140101	
Work Order No. & Date	NPL/47000-04271 DT. 23/08/2016	
Type of Sample	Ambient Air	
Sampling Protocol	IS: 5182 (P-14) 2000/CPCB Guidelines & Customer's Requirements	
Mode of Collection of Sample	Sampling by Laboratory	
Name of Sampling Location	Near Loco Shed	
Date of Sampling	27/03/2018 to 28/03/2018	
Date of Sample Receipt	28/03/2018	
Sample Receipt No.	032898218	
Period of Analysis	28/03/2018 to 30/03/2018	
Date of Reporting	30/03/2018	
Testing Protocol	NAAQS 2009	

TEST RESULTS

S. No.	Test Parameter	Unit	Results	NAAQ Standard 2009	Test Method
1.	RSPM (PM ₁₀)	µg/m ³	87	100	IS:5182 (Pt-23)
2.	FPM (PM _{2.5})	µg/m ³	55	60	EL/SOP/AAQ/01
3.	Sulphur Dioxide (SO ₂)	µg/m ³	10	80	IS:5182 (Pt-2)
4.	Nitrogen Dioxide (NO ₂)	µg/m ³	20	80	IS:5182 (P-6)
5.	Ammonia (NH ₃)	µg/m ³	28	400	EL/SOP/AAQ/02
6.	Ozone (O ₃)	µg/m ³	17	180	IS:5182 (Pt-9)
7.	Carbon Monoxide (CO)	mg/m ³	BDL(MDL1.5)	04	EL/SOP/AAQ/03
8.	Lead (Pb)	µg/m ³	BDL(MDL0.04)	1.0	IS:5182 (Pt-22)
9.	Arsenic (As)	ng/m ³	BDL(MDL1)	06	EL/SOP/AAQ/04
10.	Nickel (Ni)	ng/m ³	BDL(MDL10)	20	EL/SOP/AAQ/04
11.	Benzene (C ₆ H ₆)	µg/m ³	BDL(MDL 2)	05	IS:5182 (Pt-11)
12.	Benzo(a)pyrene (BaP)	ng/m ³	BDL(MDL0.5)	01	IS:5182 (Pt-12)

Note: BDL-Below Detection Level; MDL-Method Detection Level

Analyst/Lab In-charge

(Signature)
(Chemical)

Authorized Signatory (Chemical)

(Signature)
(Er. Sandeep Gang)
Managing Director

End of Report

PTO

ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

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ISO - 9001 : 2015, 14001 : 2015 OHSAS-18001:2007

CIN : U74140PB2011PTC034739



TEST REPORT

PPCB-Ref. No. Lab/3233892

Dated-30.09.2011

Test Report No.: EL280318GA005 <i>EL-18-19/9867</i>		Page No. 1/1
Customer Detail (Name & Address)	Nabha Power Limited PO Box 28 Near Village-Nalash Distt Patiala, Rajpura-140101	
Work Order No. & Date	NPL/47000-04271 DT. 23/08/2016	
Type of Sample	Ambient Air	
Sampling Protocol	IS: 5182 (P-14) 2000/CPCB Guidelines & Customer's Requirements	
Mode of Collection of Sample	Sampling by Laboratory	
Name of Sampling Location	Vill. Dadumajra	
Date of Sampling	27/03/2018 to 28/03/2018	
Date of Sample Receipt	28/03/2018	
Sample Receipt No.	032898718	
Period of Analysis	28/03/2018 to 30/03/2018	
Date of Reporting	30/03/2018	
Testing Protocol	NAAQS 2009	

TEST RESULTS

S. No.	Test Parameter	Unit	Results	NAAQ Standard 2009	Test Method
1.	RSPM (PM ₁₀)	µg/m ³	76	100	IS:5182 (Pt-23)
2.	FPM (PM _{2.5})	µg/m ³	37	60	EL/SOP/AAQ/01
3.	Sulphur Dioxide (SO ₂)	µg/m ³	7.0	80	IS:5182 (Pt-2)
4.	Nitrogen Dioxide (NO ₂)	µg/m ³	17	80	IS:5182 (P-6)
5.	Ammonia (NH ₃)	µg/m ³	32	400	EL/SOP/AAQ/02
6.	Ozone (O ₃)	µg/m ³	16	180	IS:5182 (Pt-9)
7.	Carbon Monoxide (CO)	mg/m ³	BDL(MDL1.5)	04	EL/SOP/AAQ/03
8.	Lead (Pb)	µg/m ³	BDL(MDL0.04)	1.0	IS:5182 (Pt-22)
9.	Arsenic (As)	ng/m ³	BDL(MDL1)	06	EL/SOP/AAQ/04
10.	Nickel (Ni)	ng/m ³	BDL(MDL10)	20	EL/SOP/AAQ/04
11.	Benzene (C ₆ H ₆)	µg/m ³	BDL(MDL 2)	05	IS:5182 (Pt-11)
12.	Benzo(a)pyrene (BaP)	ng/m ³	BDL(MDL0.5)	01	IS:5182 (Pt-12)

Note: BDL-Below Detection Level; MDL-Method Detection Level

Analyst/Lab In-charge

[Signature]
(Chemical)

Authorized Signatory (Chemical)

[Signature]
(Er. Sandeep Garg)
Managing Director

End of Report

PTO



Eco Laboratories & Consultants Pvt. Ltd.

NABL / MOEF / PPCB / HSPCB / BIS approved Laboratory

ISO - 9001 : 2015, 14001 : 2015 OHSAS-18001:2007

CIN : U74140PB2011PTC034739



TEST REPORT

PPCB-Ref No. Lab/3225097
Date: 30/03/2018

Test Report No.: EL280318GA006 EL-18-19/9868		Page No. 1/1
Customer Detail (Name & Address)	Nabha Power Limited PO Box 28 Near Village-Nalash Distt Patiala , Rajpura-140101	
Work Order No. & Date	NPL/47000-04271 DT. 23/08/2016	
Type of Sample	Ambient Air	
Sampling Protocol	IS: 5182 (P-14) 2000/CPCB Guidelines & Customer's Requirements	
Mode of Collection of Sample	Sampling by Laboratory	
Name of Sampling Location	Near NDCT	
Date of Sampling	27/03/2018 to 28/03/2018	
Date of Sample Receipt	28/03/2018	
Sample Receipt No.	032898618	
Period of Analysis	28/03/2018 to 30/03/2018	
Date of Reporting	30/03/2018	
Testing Protocol	NAAQS 2009	

TEST RESULTS

S. No.	Test Parameter	Unit	Results	NAAQ Standard 2009	Test Method
1.	RSPM (PM ₁₀)	µg/m ³	89	100	IS:5182 (Pt-23)
2.	FPM (PM _{2.5})	µg/m ³	54	60	EL/SOP/AAQ/01
3.	Sulphur Dioxide (SO ₂)	µg/m ³	10	80	IS:5182 (Pt-2)
4.	Nitrogen Dioxide (NO ₂)	µg/m ³	22	80	IS:5182 (P-6)
5.	Ammonia (NH ₃)	µg/m ³	29	400	EL/SOP/AAQ/02
6.	Ozone (O ₃)	µg/m ³	18	180	IS:5182 (Pt-9)
7.	Carbon Monoxide (CO)	mg/m ³	BDL(MDL1.5)	04	EL/SOP/AAQ/03
8.	Lead (Pb)	µg/m ³	BDL(MDL0.04)	1.0	IS:5182 (Pt-22)
9.	Arsenic (As)	ng/m ³	BDL(MDL1)	06	EL/SOP/AAQ/04
10.	Nickel (Ni)	ng/m ³	BDL(MDL10)	20	EL/SOP/AAQ/04
11.	Benzene (C ₆ H ₆)	µg/m ³	BDL(MDL 2)	05	IS:5182 (Pt-11)
12.	Benzo(a)pyrene (BaP)	ng/m ³	BDL(MDL0.5)	01	IS:5182 (Pt-12)

Note: BDL-Below Detection Level; MDL-Method Detection Level

Analyst/Lab In-charge

(Chemical)

Authorized Signatory (Chemical)

(Er. Sandeep Garg)
Managing Director

End of Report

PTO

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CIN : U74140PB2011PTC034739



TEST REPORT

Test Report No.: EL280318GA007 <i>EL-18-19/9869</i>		Page No. 1/1
Customer Detail (Name & Address)	Nabha Power Limited PO Box 28 Near Village-Nalash Distt Patiala , Rajpura-140101	
Work Order No. & Date	NPL/47000-04271 DT. 23/08/2016	
Type of Sample	Ambient Air	
Sampling Protocol	IS: 5182 (P-14) 2000/CPCB Guidelines & Customer's Requirements	
Mode of Collection of Sample	Sampling by Laboratory	
Name of Sampling Location	Vill. Salempura Rajpura	
Date of Sampling	27/03/2018 to 28/03/2018	
Date of Sample Receipt	28/03/2018	
Sample Receipt No.	032898518	
Period of Analysis	28/03/2018 to 30/03/2018	
Date of Reporting	30/03/2018	
Testing Protocol	NAAQS 2009	

TEST RESULTS

S. No.	Test Parameter	Unit	Results	NAAQ Standard 2009	Test Method
1.	RSPM (PM ₁₀)	µg/m ³	72	100	IS:5182 (Pt-23)
2.	FPM (PM _{2.5})	µg/m ³	38	60	EL/SOP/AAQ/01
3.	Sulphur Dioxide (SO ₂)	µg/m ³	7.0	80	IS:5182 (Pt-2)
4.	Nitrogen Dioxide (NO ₂)	µg/m ³	18	80	IS:5182 (P-6)
5.	Ammonia (NH ₃)	µg/m ³	33	400	EL/SOP/AAQ/02
6.	Ozone (O ₃)	µg/m ³	16	180	IS:5182 (Pt-9)
7.	Carbon Monoxide (CO)	mg/m ³	BDL(MDL1.5)	04	EL/SOP/AAQ/03
8.	Lead (Pb)	µg/m ³	BDL(MDL0.04)	1.0	IS:5182 (Pt-22)
9.	Arsenic (As)	ng/m ³	BDL(MDL1)	06	EL/SOP/AAQ/04
10.	Nickel (Ni)	ng/m ³	BDL(MDL10)	20	EL/SOP/AAQ/04
11.	Benzene (C ₆ H ₆)	µg/m ³	BDL(MDL 2)	05	IS:5182 (Pt-11)
12.	Benzo(a)pyrene (BaP)	ng/m ³	BDL(MDL0.5)	01	IS:5182 (Pt-12)

Note: BDL-Below Detection Level; MDL-Method Detection Level

Analyst/Lab In-charge

(Signature)
(Chemical)

Authorized Signatory (Chemical)

(Signature)
(E. Sandeep Garg)
Managing Director

End of Report

PTO

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CIN : U74140PB2011PTC034739



TEST REPORT

PPCB-Ref. No. 142/3238392
Dated 30.03.2018

Test Report No.: EL280318GA008 <i>EL-18-19/9870</i>		Page No. 1/1
Customer Detail (Name & Address)	Nabha Power Limited PO Box 28 Near Village-Nalash Distt Patiala , Rajpura-140101	
Work Order No. & Date	NPL/47000-04271 DT. 23/08/2016	
Type of Sample	Ambient Air	
Sampling Protocol	IS: 5182 (P-14) 2000/CPCB Guidelines & Customer's Requirements	
Mode of Collection of Sample	Sampling by Laboratory	
Name of Sampling Location	Near Switch Yard	
Date of Sampling	27/03/2018 to 28/03/2018	
Date of Sample Receipt	28/03/2018	
Sample Receipt No.	032898418	
Period of Analysis	28/03/2018 to 30/03/2018	
Date of Reporting	30/03/2018	
Testing Protocol	NAAQS 2009	

TEST RESULTS

S. No.	Test Parameter	Unit	Results	NAAQ Standard 2009	Test Method
1.	RSPM (PM ₁₀)	µg/m ³	81	100	IS:5182 (Pt-23)
2.	FPM (PM _{2.5})	µg/m ³	51	60	EL/SOP/AAQ/01
3.	Sulphur Dioxide (SO ₂)	µg/m ³	10	80	IS:5182 (Pt-2)
4.	Nitrogen Dioxide (NO ₂)	µg/m ³	21	80	IS:5182 (P-6)
5.	Ammonia (NH ₃)	µg/m ³	31	400	EL/SOP/AAQ/02
6.	Ozone (O ₃)	µg/m ³	18	180	IS:5182 (Pt-9)
7.	Carbon Monoxide (CO)	mg/m ³	BDL(MDL1.5)	04	EL/SOP/AAQ/03
8.	Lead (Pb)	µg/m ³	BDL(MDL0.04)	1.0	IS:5182 (Pt-22)
9.	Arsenic (As)	ng/m ³	BDL(MDL1)	06	EL/SOP/AAQ/04
10.	Nickel (Ni)	ng/m ³	BDL(MDL10)	20	EL/SOP/AAQ/04
11.	Benzene (C ₆ H ₆)	µg/m ³	BDL(MDL 2)	05	IS:5182 (Pt-11)
12.	Benzo(a)pyrene (BaP)	ng/m ³	BDL(MDL0.5)	01	IS:5182 (Pt-12)

Note: BDL-Below Detection Level; MDL-Method Detection Level

Not Valid for Consent Purpose
Analyst/Lab In-charge

(Chemical)

Authorized Signatory (Chemical)

(*Er. Sandeep Garg*)
Managing Director

End of Report

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PPCB-Ref. No. L16/3230932
Dated-30.03.2018

TEST REPORT

Test Report No.: EL280318GA009 <i>EL-18-19/9871</i>		Page No. 1/1
Customer Detail (Name & Address)	Nabha Power Limited PO Box 28 Near Village-Nalash Distt Patiala , Rajpura-140101	
Work Order No. & Date	NPL/47000-04271 DT. 23/08/2016	
Type of Sample	Ambient Air	
Sampling Protocol	IS: 5182 (P-14) 2000/CPCB Guidelines & Customer's Requirements	
Mode of Collection of Sample	Sampling by Laboratory	
Name of Sampling Location	Near Storm Water Sump	
Date of Sampling	27/03/2018 to 28/03/2018	
Date of Sample Receipt	28/03/2018	
Sample Receipt No.	032898318	
Period of Analysis	28/03/2018 to 30/03/2018	
Date of Reporting	30/03/2018	
Testing Protocol	NAAQS 2009	

TEST RESULTS

S. No.	Test Parameter	Unit	Results	NAAQ Standard 2009	Test Method
1.	RSPM (PM ₁₀)	µg/m ³	84	100	IS:5182 (Pt-23)
2.	FPM (PM _{2.5})	µg/m ³	52	60	EL/SOP/AAQ/01
3.	Sulphur Dioxide (SO ₂)	µg/m ³	11	80	IS:5182 (Pt-2)
4.	Nitrogen Dioxide (NO ₂)	µg/m ³	20	80	IS:5182 (P-6)
5.	Ammonia (NH ₃)	µg/m ³	30	400	EL/SOP/AAQ/02
6.	Ozone (O ₃)	µg/m ³	19	180	IS:5182 (Pt-9)
7.	Carbon Monoxide (CO)	mg/m ³	BDL(MDL1.5)	04	EL/SOP/AAQ/03
8.	Lead (Pb)	µg/m ³	BDL(MDL0.04)	1.0	IS:5182 (Pt-22)
9.	Arsenic (As)	ng/m ³	BDL(MDL1)	06	EL/SOP/AAQ/04
10.	Nickel (Ni)	ng/m ³	BDL(MDL10)	20	EL/SOP/AAQ/04
11.	Benzene (C ₆ H ₆)	µg/m ³	BDL(MDL 2)	05	IS:5182 (Pt-11)
12.	Benzo(a)pyrene (BaP)	ng/m ³	BDL(MDL0.5)	01	IS:5182 (Pt-12)

Note: BDL-Below Detection Level; MDL-Method Detection Level

Not Valid for Consent Purpose
Analyst/Lab In-charge

[Signature]

(Chemical)

Authorized Signatory (Chemical)

[Signature]
(E) Sandeep Garg
Managing Director

End of Report

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CIN : U74140PB2011PTC034739



PPCB Ref No. Lab/321889/2
Dated: 30.01.2011

TEST REPORT

Test Report No.: EL280318GA010 <i>EL-19/9872</i>		Page No. 1/1
Customer Detail (Name & Address)	Nabha Power Limited PO Box 28 Near Village-Nalash Distt Patiala , Rajpura-140101	
Work Order No. & Date	NPL/47000-04271 DT. 23/08/2016	
Type of Sample	Ambient Air	
Sampling Protocol	IS: 5182 (P-14) 2000/CPCB Guidelines & Customer's Requirements	
Mode of Collection of Sample	Sampling by Laboratory	
Name of Sampling Location	Near Loco Shed	
Date of Sampling	27/03/2018 to 28/03/2018	
Date of Sample Receipt	28/03/2018	
Sample Receipt No.	032898218	
Period of Analysis	28/03/2018 to 30/03/2018	
Date of Reporting	30/03/2018	
Testing Protocol	NAAQS 2009	

TEST RESULTS

S. No.	Test Parameter	Unit	Results	NAAQ Standard 2009	Test Method
1.	RSPM (PM ₁₀)	µg/m ³	87	100	IS:5182 (Pt-23)
2.	FPM (PM _{2.5})	µg/m ³	55	60	EL/SOP/AAQ/01
3.	Sulphur Dioxide (SO ₂)	µg/m ³	10	80	IS:5182 (Pt-2)
4.	Nitrogen Dioxide (NO ₂)	µg/m ³	20	80	IS:5182 (P-6)
5.	Ammonia (NH ₃)	µg/m ³	28	400	EL/SOP/AAQ/02
6.	Ozone (O ₃)	µg/m ³	17	180	IS:5182 (Pt-9)
7.	Carbon Monoxide (CO)	mg/m ³	BDL(MDL1.5)	04	EL/SOP/AAQ/03
8.	Lead (Pb)	µg/m ³	BDL(MDL0.04)	1.0	IS:5182 (Pt-22)
9.	Arsenic (As)	ng/m ³	BDL(MDL1)	06	EL/SOP/AAQ/04
10.	Nickel (Ni)	ng/m ³	BDL(MDL10)	20	EL/SOP/AAQ/04
11.	Benzene (C ₆ H ₆)	µg/m ³	BDL(MDL 2)	05	IS:5182 (Pt-11)
12.	Benzo(a)pyrene (BaP)	ng/m ³	BDL(MDL0.5)	01	IS:5182 (Pt-12)

Note: BDL-Below Detection Level; MDL-Method Detection Level

Analyst/Lab In-charge

(Signature)
(Chemical)

Authorized Signatory (Chemical)

(Signature)
(En. Sandeep Gang)
Managing Director

End of Report

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Dated-30.09.2011

TEST REPORT

Test Report No. :EL131217GA002	EL17-14/7437-9	Page No. 1/2
Customer	Nabha Power Limited PO Box 28 Near Village-Nalash Distt Patiala , Rajpura-140101	
Work Order No. & Date	NPL/47000-04271 Dt.: 23/08/2016	
Type of Sample	Ambient Air	
Mode of Collection of Sample	Sampling by laboratory	
Date of Sampling	12/12/2017	
Sampling Location	Vill. Dabhali Rajpura	
Sampling Protocol	IS: 5182 (P-14) 2000, CPCB Guidelines and Customer's Requirements.	
Date of Receipt of Sample	13/12/2017	
Period of Analysis	13/12/2017 to 16/12/2017	
Date of Reporting	16/12/2017	
Testing Protocol	NAAQS 2009	
Environmental Condition	Clear	

RESULTS

S.No.	Test Parameter	Units	Results	NAAQS 2009	Test Method
1	Particulate Matter (PM ₁₀)	µg/m ³	87	100	IS:5182 (P-23) 2006
2	Particulate Matter (PM _{2.5})	µg/m ³	49	60	Lab SOP EL/SOP/AAQ/01, Issue No.03 & Dated 01.01.2016
3	Sulphur Dioxide (SO ₂)	µg/m ³	7.6	80	IS:5182 (P-2) 2001
4	Nitrogen Oxides (as NO ₂)	µg/m ³	15.6	80	IS:5182 (P-6) 2006
5	Ammonia (NH ₃)	µg/m ³	29	400	Lab SOP EL/SOP/AAQ/02, Issue No. & Issue Date 03 & 01.01.16
6	Ozone (O ₃)	µg/m ³	15	180	IS:5182 (Part-9)2006
7	Carbon Monoxide (CO)	mg/m ³	<1.5	04	Lab SOP EL/SOP/AAQ/03, Issue No.03 & Date 03 & 01.01.16
8	Lead (Pb)	µg/m ³	<0.04	1.0	IS:5182 (P-22) 2004
9	Arsenic (As)	ng/m ³	<1	06	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01.01.2016
10	Nickel (Ni)	ng/m ³	<10	20	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01.01.2016
11	Benzene (C ₆ H ₆)	µg/m ³	<2	05	IS:5182 (P-11) 2006

Not Valid for Consent Purpose



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PPCB-Ref. No. Lab/3238592

Dated-30.09.2011



Test Report No. :EL131217GA002						Page No. 2/2
S.No.	Test Parameter	Units	Results	NAAQS 2009	Test Method	
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m ³	<0.5	01	IS:5182 (P-12) 2004	
13	Mercury as particulate phase (HgP)	µg/m ³	<0.001	--	IS 5182 Part 23/ CPCB Method	

Remarks (if any)

End of Report

For Eco Laboratories & Consultants Pvt. Ltd.

Lab Incharge

Authorized Signatory





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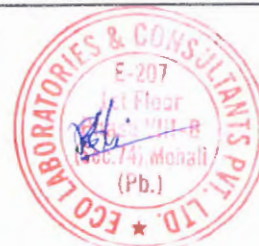
TEST REPORT

Test Report No. :EL131217GA003	EL-17-18/7438-2	Page No. 1/2
Customer	Nabha Power Limited PO Box 28 Near Village-Nalash Distt Patiala , Rajpura-140101	
Work Order No. & Date	NPL/47000-04271 Dt: 23/08/2016	
Type of Sample	Ambient Air	
Mode of Collection of Sample	Sampling by laboratory	
Date of Sampling	12/12/2017	
Sampling Location	Vill. Dadumajra	
Sampling Protocol	IS: 5182 (P-14) 2000, CPCB Guidelines and Customer's Requirements.	
Date of Receipt of Sample	13/12/2017	
Period of Analysis	13/12/2017 to 16/12/2017	
Date of Reporting	16/12/2017	
Testing Protocol	NAAQS 2009	
Environmental Condition	Clear	

RESULTS

S.No.	Test Parameter	Units	Results	NAAQS 2009	Test Method
1	Particulate Matter (PM ₁₀)	µg/m ³	82	100	IS:5182 (P-23) 2006
2	Particulate Matter (PM _{2.5})	µg/m ³	46	60	Lab SOP EL/SOP/AA/Q/01, Issue No.03 & Dated 01.01.2016
3	Sulphur Dioxide (SO ₂)	µg/m ³	7.7	80	IS:5182 (P-2) 2001
4	Nitrogen Oxides (as NO ₂)	µg/m ³	16.6	80	IS:5182 (P-6) 2006
5	Ammonia (NH ₃)	µg/m ³	28	400	Lab SOP EL/SOP/AAQ/02, Issue No. & Issue Date 03 & 01.01.16
6	Ozone (O ₃)	µg/m ³	14	180	IS:5182 (Part-9)2006
7	Carbon Monoxide (CO)	mg/m ³	<1.5	04	Lab SOP EL/SOP/AAQ/03, Issue No.03 & Date 03 & 01.01.16
8	Lead (Pb)	µg/m ³	<0.04	1.0	IS:5182 (P-22) 2004
9	Arsenic (As)	ng/m ³	<1	06	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01.01.2016
10	Nickel (Ni)	ng/m ³	<10	20	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01.01.2016
11	Benzene (C ₆ H ₆)	µg/m ³	<2	05	IS:5182 (P-11) 2006.

Not Valid for Consent Purpose



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PPCD-Ref No: Lab/1111
Date: 10/02/2011

Test Report No. : EL131217GA003					Page No. 2/2
S.No.	Test Parameter	Units	Results	NAAQS 2009	Test Method
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m ³	<0.5	01	IS:5182 (P-12) 2004
13	Mercury as particulate phase (HgP)	µg/m ³	<0.001	--	IS 5182 Part 23/ CPCB Method

Remarks (if any)

Not Valid for Consent Purpose


Lab Incharge

End of Report

For Eco Laboratories & Consultants Pvt. Ltd.

Authorized Signatory





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CIN : U74140PB2011PTC034739



ISO 9001:2015

TEST REPORT



Test Report No. : EL131217GA004		82-17-18/7439-4	Page No. 1/2
Customer	Nabha Power Limited PO Box 28 Near Village-Nalash Distt Patiala , Rajpura-140101		
Work Order No. & Date	NPL/47000-04271 Dt.: 23/08/2016		
Type of Sample	Ambient Air		
Mode of Collection of Sample	Sampling by laboratory		
Date of Sampling	12/12/2017		
Sampling Location	Vill. Salempura Rajpura		
Sampling Protocol	IS: 5182 (P-14) 2000, CPCB Guidelines and Customer's Requirements.		
Date of Receipt of Sample	13/12/2017		
Period of Analysis	13/12/2017 to 16/12/2017		
Date of Reporting	16/12/2017		
Testing Protocol	NAAQS 2009		
Environmental Condition	Clear		

RESULTS

S.No.	Test Parameter	Units	Results	NAAQS 2009	Test Method
1	Particulate Matter (PM ₁₀)	µg/m ³	85	100	IS:5182 (P-23) 2006
2	Particulate Matter (PM _{2.5})	µg/m ³	47	60	Lab SOP EL/SOP/AA/Q/01, Issue No.03 & Dated 01.01.2016
3	Sulphur Dioxide (SO ₂)	µg/m ³	7.9	80	IS:5182 (P-2) 2001
4	Nitrogen Oxides (as NO ₂)	µg/m ³	16.3	80	IS:5182 (P-6) 2006
5	Ammonia (NH ₃)	µg/m ³	28	400	Lab SOP EL/SOP/AAQ/02, Issue No. & Issue Date 03 & 01.01.16
6	Ozone (O ₃)	µg/m ³	14	180	IS:5182 (Part-9)2006
7	Carbon Monoxide (CO)	mg/m ³	<1.5	04	Lab SOP EL/SOP/AAQ/03, Issue No.03 & Date 03 & 01.01.16
8	Lead (Pb)	µg/m ³	<0.04	1.0	IS:5182 (P-22) 2004
9	Arsenic (As)	ng/m ³	<1	06	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01.01.2016
10	Nickel (Ni)	ng/m ³	<10	20	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01.01.2016
11	Benzene (C ₆ H ₆)	µg/m ³	<2	05	IS:5182 (P-11) 2006.

Not Valid for Consent Purpose



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TEST REPORT

Test Report No. : EL131217GA005		EL-17-11/7440-A	Page No. 1/2
Customer	Nabha Power Limited PO Box 28 Near Village-Nalash Distt Patiala , Rajpura-140101		
Work Order No. & Date	NPL/47000-04271 Dt: 23/08/2016		
Type of Sample	Ambient Air		
Mode of Collection of Sample	Sampling by laboratory		
Date of Sampling	12/12/2017		
Sampling Location	Near NDCT		
Sampling Protocol	IS: 5182 (P-14) 2000, CPCB Guidelines and Customer's Requirements.		
Date of Receipt of Sample	13/12/2017		
Period of Analysis	13/12/2017 to 16/12/2017		
Date of Reporting	16/12/2017		
Testing Protocol	NAAQS 2009		
Environmental Condition	Clear		

RESULTS

S.No.	Test Parameter	Units	Results	NAAQS 2009	Test Method
1	Particulate Matter (PM ₁₀)	µg/m ³	95	100	IS:5182 (P-23) 2006
2	Particulate Matter (PM _{2.5})	µg/m ³	56	60	Lab SOP EL/SOP/AAQ/01, Issue No.03 & Dated 01.01.2016
3	Sulphur Dioxide (SO ₂)	µg/m ³	7.9	80	IS:5182 (P-2) 2001
4	Nitrogen Oxides (as NO ₂)	µg/m ³	16.9	80	IS:5182 (P-6) 2006
5	Ammonia (NH ₃)	µg/m ³	28	400	Lab SOP EL/SOP/AAQ/02, Issue No. & Issue Date 03 & 01.01.16
6	Ozone (O ₃)	µg/m ³	10	180	IS:5182 (Part-9)2006
7	Carbon Monoxide (CO)	mg/m ³	<1.5	04	Lab SOP EL/SOP/AAQ/03, Issue No.03 & Date 03 & 01.01.16
8	Lead (Pb)	µg/m ³	<0.04	1.0	IS:5182 (P-22) 2004
9	Arsenic (As)	ng/m ³	<1	06	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01.01.2016
10	Nickel (Ni)	ng/m ³	<10	20	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01.01.2016
11	Benzene (C ₆ H ₆)	µg/m ³	<2	05	IS:5182 (P-11) 2006.

Not Valid for Consent Purpose



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PPCD-Ref No. Lab/32385A1



Test Report No. :EL131217GA004					EL-17-18/7439-2	Page No. 2/2
S.No.	Test Parameter	Units	Results	NAAQS 2009	Test Method	
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m ³	<0.5	01	IS:5182 (P-12) 2004	
13	Mercury as particulate phase (HgP)	µg/m ³	<0.001	--	IS 5182 Part 23/ CPCB Method	


Remarks (if any)

For Constant Purpose

End of Report

For Eco Laboratories & Consultants Pvt. Ltd.


Lab Incharge


Authorized Signatory



20.11.2011

Test Report No. :EL131217GA005						Page No. 2/2
S.No.	Test Parameter	Units	Results	NAAQS 2009	Test Method	
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m ³	<0.5	01	IS:5182 (P-12) 2004	
13	Mercury as particulate phase (HgP)	µg/m ³	<0.001	--	IS 5182 Part 23/ CPCB Method	


Remarks (if any)

Not Valid for Consent Purpose

End of Report

For Eco Laboratories & Consultants Pvt. Ltd.


Lab Incharge


Authorized Signatory



Eco Laboratories & Consultants Pvt. Ltd.

NABL / MOEF / PPCB / HSPCB / BIS approved Laboratory

ISO - 9001 : 2015, 14001 : 2015 OHSAS-18001:2007

CIN : U74140PB2011PTC034739



TEST REPORT

Test Report No. :EL131217GA006		EL-17-B/7441-a	Page No. 1/2
Customer	Nabha Power Limited PO Box 28 Near Village-Nalash Distt Patiala , Rajpura-140101		
Work Order No. & Date	NPL/47000-04271 Dt.: 23/08/2016		
Type of Sample	Ambient Air		
Mode of Collection of Sample	Sampling by laboratory		
Date of Sampling	12/12/2017		
Sampling Location	Near Loco Shed		
Sampling Protocol	IS: 5182 (P-14) 2000, CPCB Guidelines and Customer's Requirements.		
Date of Receipt of Sample	13/12/2017		
Period of Analysis	13/12/2017 to 16/12/2017		
Date of Reporting	16/12/2017		
Testing Protocol	NAAQS 2009		
Environmental Condition	Clear		

RESULTS

S.No.	Test Parameter	Units	Results	NAAQS 2009	Test Method
1	Particulate Matter (PM ₁₀)	µg/m ³	91	100	IS:5182 (P-23) 2006
2	Particulate Matter (PM _{2.5})	µg/m ³	51	60	Lab SOP EL/SOP/AAQ/01, Issue No.03 & Dated 01.01.2016
3	Sulphur Dioxide (SO ₂)	µg/m ³	9.8	80	IS:5182 (P-2) 2001
4	Nitrogen Oxides (as NO ₂)	µg/m ³	19.5	80	IS:5182 (P-6) 2006
5	Ammonia (NH ₃)	µg/m ³	27	400	Lab SOP EL/SOP/AAQ/02, Issue No. & Issue Date 03 & 01.01.16
6	Ozone (O ₃)	µg/m ³	12	180	IS:5182 (Part-9)2006
7	Carbon Monoxide (CO)	mg/m ³	<1.5	04	Lab SOP EL/SOP/AAQ/03, Issue No.03 & Date 03 & 01.01.16
8	Lead (Pb)	µg/m ³	<0.04	1.0	IS:5182 (P-22) 2004
9	Arsenic (As)	ng/m ³	<1	06	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01.01.2016
10	Nickel (Ni)	ng/m ³	<10	20	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01.01.2016
11	Benzene (C ₆ H ₆)	µg/m ³	<2	05	IS:5182 (P-11) 2006.

Not Valid for Consent Purpose



PTO

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Date: 20/09/2011

Test Report No. : EL131217GA006					Page No. 2/2
S.No.	Test Parameter	Units	Results	NAAQS 2009	Test Method
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m ³	<0.5	01	IS:5182 (P-12) 2004
13	Mercury as particulate phase (HgP)	µg/m ³	<0.001	—	IS 5182 Part 23/ CPCB Method

Remarks (if any)

Not valid for Consent Purpose


Lab Incharge

End of Report

For Eco Laboratories & Consultants Pvt. Ltd.


Authorized Signatory



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ISO - 9001 : 2015, 14001 : 2015 OHSAS-18001:2007

CIN : U74140PB2011PTC034739



TEST REPORT

Test Report No. :EL131217GA007	EL-17-18/7442-A	Page No. 1/2
Customer	Nabha Power Limited PO Box 28 Near Village-Nalash Distt Patiala , Rajpura-140101	
Work Order No. & Date	NPL/47000-04271 Dt.: 23/08/2016	
Type of Sample	Ambient Air	
Mode of Collection of Sample	Sampling by laboratory	
Date of Sampling	12/12/2017	
Sampling Location	Near Storm Water Pump	
Sampling Protocol	IS: 5182 (P-14) 2000, CPCB Guidelines and Customer's Requirements.	
Date of Receipt of Sample	13/12/2017	
Period of Analysis	13/12/2017 to 16/12/2017	
Date of Reporting	16/12/2017	
Testing Protocol	NAAQS 2009	
Environmental Condition	Clear	

RESULTS

S.No.	Test Parameter	Units	Results	NAAQS 2009	Test Method
1	Particulate Matter (PM ₁₀)	µg/m ³	96	100	IS:5182 (P-23) 2006
2	Particulate Matter (PM _{2.5})	µg/m ³	58	60	Lab SOP EL/SOP/AAQ/01, Issue No.03 & Dated 01.01.2016
3	Sulphur Dioxide (SO ₂)	µg/m ³	10.9	80	IS:5182 (P-2) 2001
4	Nitrogen Oxides (as NO ₂)	µg/m ³	21.6	80	IS:5182 (P-6) 2006
5	Ammonia (NH ₃)	µg/m ³	29	400	Lab SOP EL/SOP/AAQ/02, Issue No. & Issue Date 03 & 01.01.16
6	Ozone (O ₃)	µg/m ³	11	180	IS:5182 (Part-9)2006
7	Carbon Monoxide (CO)	mg/m ³	<1.5	04	Lab SOP EL/SOP/AAQ/03, Issue No.03 & Date 03 & 01.01.16
8	Lead (Pb)	µg/m ³	<0.04	1.0	IS:5182 (P-22) 2004
9	Arsenic (As)	ng/m ³	<1	06	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01.01.2016
10	Nickel (Ni)	ng/m ³	<10	20	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01.01.2016
11	Benzene (C ₆ H ₆)	µg/m ³	<2	05	IS:5182 (P-11) 2006.

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Test Report No. :EL131217GA007					Page No. 2/2
S.No.	Test Parameter	Units	Results	NAAQS 2009	Test Method
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m ³	<0.5	01	IS:5182 (P-12) 2004
13	Mercury as particulate phase (HgP)	µg/m ³	<0.001	--	IS 5182 Part 23/ CPCB Method

Remarks (if any)


Not Valid for Consent Purpose



Lab Incharge

End of Report

For Eco Laboratories & Consultants Pvt. Ltd.


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ISO - 9001 : 2015, 14001 : 2015 OHSAS-18001:2007

CIN : U74140PB2011PTC034739



TEST REPORT



Test Report No. :EL131217GA008	EL17-18/7442-9	Page No. 1/2
Customer	Nabha Power Limited PO Box 28 Near Village-Nalash Distt Patiala , Rajpura-140101	
Work Order No. & Date	NPL/47000-04271 Dt.: 23/08/2016	
Type of Sample	Ambient Air	
Mode of Collection of Sample	Sampling by laboratory	
Date of Sampling	12/12/2017	
Sampling Location	Near Switch Yard	
Sampling Protocol	IS: 5182 (P-14) 2000, CPCB Guidelines and Customer's Requirements.	
Date of Receipt of Sample	13/12/2017	
Period of Analysis	13/12/2017 to 16/12/2017	
Date of Reporting	16/12/2017	
Testing Protocol	NAAQS 2009	
Environmental Condition	Clear	

RESULTS

S.No.	Test Parameter	Units	Results	NAAQS 2009	Test Method
1	Particulate Matter (PM ₁₀)	µg/m ³	89	100	IS:5182 (P-23) 2006
2	Particulate Matter (PM _{2.5})	µg/m ³	50	60	Lab SOP EL/SOP/AAQ/01, Issue No.03 & Dated 01.01.2016
3	Sulphur Dioxide (SO ₂)	µg/m ³	17.6	80	IS:5182 (P-2) 2001
4	Nitrogen Oxides (as NO ₂)	µg/m ³	28	80	IS:5182 (P-6) 2006
5	Ammonia (NH ₃)	µg/m ³	10	400	Lab SOP EL/SOP/AAQ/02, Issue No. & Issue Date 03 & 01.01.16
6	Ozone (O ₃)	µg/m ³	10	180	IS:5182 (Part-9)2006
7	Carbon Monoxide (CO)	mg/m ³	<1.5	04	Lab SOP EL/SOP/AAQ/03, Issue No.03 & Date 03 & 01.01.16
8	Lead (Pb)	µg/m ³	<0.04	1.0	IS:5182 (P-22) 2004
9	Arsenic (As)	ng/m ³	<1	06	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01.01.2016
10	Nickel (Ni)	ng/m ³	<10	20	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01.01.2016
11	Benzene (C ₆ H ₆)	µg/m ³	<2	05	IS:5182 (P-11) 2006.

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PPCB-Ref. No. Lab/329-
Dated-30.09.2014



Test Report No. :EL131217GA008					Page No. 2/2
S.No.	Test Parameter	Units	Results	NAAQS 2009	Test Method
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m ³	<0.5	01	IS:5182 (P-12) 2004
13	Mercury as particulate phase (HgP)	µg/m ³	<0.001	--	IS 5182 Part 23/ CPCB Method

Remarks (if any)

End of Report

For Consent Purpose

Lab Incharge

For Eco Laboratories & Consultants Pvt. Ltd.

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