



## NABHA POWER LIMITED

Mailing Address: Aspire Tower, 4<sup>th</sup> Floor Plot No. 55, Industrial and Business Park, Phase-1, Chandigarh-160 002  
Phone: 0172 4646846 • Fax: 0172 4646802

Ref: NPL/RB/MOEF/633

Dated: July 18, 2017

To,

Director (S),  
Government of India,  
Ministry of Environment, Forests & Climate Change,  
Northern Regional Office,  
Chandigarh-160030, Punjab

**Sub:** Six Monthly compliance Status of Environment Clearance conditions from Jan-17 to June-17

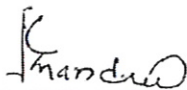
Dear Sir,

As per the conditions under Environment Clearance given to Nabha Power Limited, kindly find herewith compliance status of same for your kind reference.

Thanking you,

Yours faithfully

For Nabha Power Limited



Rajiv Bhandari  
AGM-EHS

Cc: Sh Pardeep Gupta, Sr. Environmental Engineer, Punjab Pollution Control Board, Patiala.

*Review  
21/7/17*



**NABHA POWER LIMITED**

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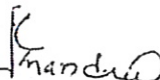
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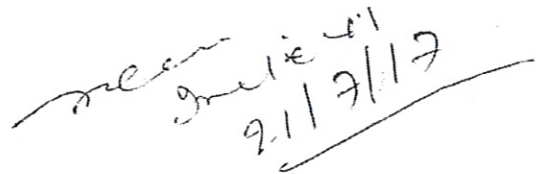
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Rajiv Bhandari  
AGM-EHS

Cc: Sh Pardeep Gupta, Sr. Environmental Engineer, Punjab Pollution Control Board, Patiala.

  
21/7/17

COMPLIANCE STATUS OF MOEF CONDITIONS @ 1400 MW (As on 30.06.2017)

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 defense 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 defense & AAI obtained on 25 <sup>th</sup> May, 2009, Ref No. :No. 21(7)/2008/D(Coord) & 22 <sup>nd</sup> July, 2008, Ref No.: No. AAI/20012/664/ 2008-AAI (NOC) respectively.
3.	Sulphur & ash contents in the coal to be used in the project shall not exceed 0.5% & 34% respectively.	Sulphur & ash contents in the coal being used are below 0.5% & 34% respectively.
4.	A bi-rate stack of height 275 m shall be provided with continuous online monitoring equipments for SO <sub>x</sub> , NO <sub>x</sub> & 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 25 m/sec.
5.	High efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure particulate emission doesn't exceed 50 mg/m <sup>3</sup> .	The ESP's attached to Boiler 1 & 2 are functional and have efficiencies more than 99.99%. The SPM emissions are < 50 mg/Nm <sup>3</sup> .
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.
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. 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.
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.

✓

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.
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 thr. letter ref: NPL/SKN/MOEF/W/23 dated: 28 <sup>th</sup> 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. On site 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.	Being done and reports are being submitted to MOEF & PPCB on six monthly basis.
18.	A green belt of adequate width and density shall be developed around plant periphery covering about 1/3 <sup>rd</sup> of project area preferably with local species.	2.5 Lakh trees already planted @2500/ha with local species.
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.	The management demonstrates its intention & commitment towards socio-economic development by providing various facilities to the nearby villagers. We are furnishing the details of the activities to MOEF and PPCB.
20.	First aid & sanitation arrangement shall be made for the drivers and other contract workers during construction phase.	First aid center & 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 <sub>2</sub> , NO <sub>x</sub> , 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-II
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 locally/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 <a href="http://envfor.nic.in">http://envfor.nic.in</a> .	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

*Handwritten mark*

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 : <a href="http://www.Intnabhapower.com">http://www.Intnabhapower.com</a>
32.	Critical pollutants levels including NO <sub>x</sub> , RPSM <sub>10</sub> and 2.5, SO <sub>2</sub> shall be regularly monitored and results displayed in your website and also at main gate of the power plant.	Being Complied.

**COMPLIANCE STATUS OF MOEF CONDITIONS FOR 2 x 700 (1400 MW)**

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 Hostel roof 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 is being tested by institute of repute and the reports are being submitted with Regional office of the ministry at Chandigarh.
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 are attached as Annexure-III
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 fulfillment of water requirement by the proposed Plant.
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.	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.
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.	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.
41	C.O.C of 5.0 shall be adopted	No Ground Water abstraction is being done. We are only using Canal water for generation of Power.
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	Therefore, the said condition is not applicable on us. Agreed Adopted and being complied. Agreed

	close coordination with the State Pollution Control Board		
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.	
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.	Being complied	
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.	Same has been complied. Support provided to three villages for supply of clean drinking water. Various initiatives already being undertaken for development of surrounding areas viz. Infrastructure Development, Support to needy families under various welfare schemes, Free Skill training for girls, Support to educational institutions/govt schools/Aganwari Centers, Tree plantation and support for other various community based need/requirement.	
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.	Same has been complied. CSR Spent during since plant inception Rs. 22 Cr. Spend during 2016-17 Rs. 4.47 Crore for CSR activities. Proposed for 2017-18 : Rs. 4.40 Cr	
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.	Complied. Presently working in 49 villages falls under the radius of 5 kms and implemented various CSR schemes in the target villages in coordination with village panchayats.  Free skill training in Beautician, Tailoring, and Embroidery is being imparted to girls thorough 11 Training centers.  Local youth are being given preference for jobs in plant as per their skills, qualification and criteria set for the job. Govt. ITI at Rajpura has been adopted for Upgradation of facilities. Advanced welding workshop and refurbishment works at ITI are being supported.	
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.	A CSR committee is already constituted at NPL level who is monitoring the CSR activities. Meetings are being organized with the Panchayats of the target villages to get their feedback/suggestions for ongoing CSR activities.	
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 is already there and HOD, Mr. Rajiv Bhandari, AGM (HSE) directly reports to the Chief Executive (Head of Organization).	
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	Regular monitoring of ground water quality including heavy metals is being carried out regularly in and around the Ash Dykes. Piezometer wells are	



52	<p>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.</p> <p>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.</p>	<p>established around the ash pond area and being regularly monitored by Punjab Pollution Control Board on quarterly basis.</p>
53	<p>The environment statement for each financial year ending 31<sup>st</sup> 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.</p>	<p>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.</p> <p>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.</p> <p>Complied.</p>
54	<p>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.</p>	<p>Last Environmental Report was submitted On 29.09.2016 with Regional Office of the Ministry at Chandigarh and PPCB, Patiala.</p> <p>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 &amp; OHSAS 18001) by LRQA &amp; Bureau Veritas respectively.</p>

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Annexure - 1

Reports

POLLUTION CONTROL BOARD PATIALA  
NABHA ROAD PATIALA  
GROUND WATER REPORT

1. Laboratory Sample No. GW 71-74/H.O.Lab./G.W. Monitoring/2017-18  
2. Name of Industry M/s Nabha Power Ltd., Village Nalash, Rajpura.  
3. Name of Sample collecting Officer Dr. Rajeev Gupta, AEE, Er. Mohit Bisht, JEE  
& Sh. Harpreet Singh, JSO.  
4. Designation of authorizing Test EE, RO, Patiala.  
5. Date & Time of Sample collection 22.05.2017  
6. Date & Time of Sample receipt in Lab. 23.05.2017  
7. Period of Analysis 23.05.2017 to 30.05.2017  
8. Test Methods As per relevant parts of IS 3025,  
IS:1622, Methods of APHA



सं. व. दि. 143/2017  
@  
दि. 2/6/17

क्र. दि. नं. 2584/सि. 2/6/17

Results

Sr. no.	Parameters	Near Coal Handling Plant	Near Storm Water Sump	Along the ash dyke	Between ash dyke & Reservoir
1	pH	7.7	7.9	7.8	7.6
2	Total Suspended Solids mg/l	43	12	10	14
3	Total Dissolved Solids mg/l	395	301	424	641
4	*Chemical Oxygen Demand mg/l	19	BDL	BDL	BDL
5	*Bio-Chemical Oxygen Demand mg/l	BDL	BDL	BDL	BDL
6	Total Hardness mg/l	166	78	108	384
7	*Mercury mg/l	BDL	BDL	BDL	BDL
8	*Lead mg/l	BDL	BDL	BDL	BDL
9	*Total Chromium mg/l	BDL	BDL	BDL	BDL

Proceeded

\*Not Covered under scope of NABL

Note: BDL means Below Method Detection Limit.

--End of Report--

Soni Kumar  
Analyzed by 31/5/17

M. Sharma/31/5/17  
Scientific Officer

Enst. No: 24331-33

Di. 1-6-17

A copy of the above is forwarded to the:-

1. The Member Secretary, Punjab Pollution Control Board, Patiala.
2. The Senior Environment Engineer, Punjab Pollution Control Board, Zonal Office-I, Patiala.
3. The Environmental Engineer, Punjab Pollution Control Board, Regional Office, Patiala

Asstt. Scientific Officer

Annexure - 2

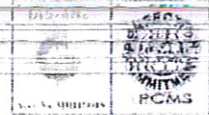


EGO Laboratories & Consultants Pvt. Ltd.

NIABL / MOEF / PPCB / HSPCB / BIS approved Laboratory

ISO - 9001 : 2008, 14001:2004 OHSAS-18001:2007

CIN : U74140PB2011PTC034739



ISO 9001:2008

## TEST REPORT



Test Report No. : EL260617GA003	EL 17-15/7937	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.: 23/06/2016	
Type of Sample	Ambient Air	
Mode of Collection of Sample	Sampling by laboratory	
Date of Sampling	23/06/2017 to 24/06/2017	
Sampling Location	Near NDCT	
Sampling Protocol	IS: 5182 (P-14) 2000, CPCB Guidelines and Customer's Requirements.	
Date of Receipt of Sample	26/06/2017	
Period of Analysis	26/06/2017 to 28/06/2017	
Date of Reporting	28/06/2017	
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 <sup>3</sup>	88	100	IS 5182 (P-23) 2001
2	Particulate Matter (PM 2.5)	µg/m <sup>3</sup>	43	60	Lab SOP No. EL/SOP/AAQ/01, Issue No. & Issue Date 03 & 01/01/2016
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	8.1	80	IS 5182 (P-2) 2001
4	Nitrogen Oxides (as NO <sub>2</sub> )	µg/m <sup>3</sup>	16.2	80	IS 5182 (P-6) 2006
5	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	24	400	Lab SOP No. EL/SOP/AAQ/02, Issue No. & Issue Date 03 & 01/01/2016
6	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	12	180	IS 5182 (Part-9) 1974 R2003
7	Carbon Monoxide (CO)	mg/m <sup>3</sup>	<1.5	04	Lab SOP No. EL/SOP/AAQ/03, Issue No. & Issue Date 03 & 01/01/2016
8	Lead (Pb)	µg/m <sup>3</sup>	<0.04	1.0	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01/01/2016
9	Arsenic (As)	ng/m <sup>3</sup>	<1	06	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01/01/2016
10	Nickel (Ni)	ng/m <sup>3</sup>	<10	20	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01/01/2016
11	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	<2	05	IS 5182 (P-11) 2000

Signature

PTO

PTO

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

Tel: 0172-4019326, M: 9781362709, Fax: 0172-4019326, Email: info@egolab.com, nabl@egolab.com, www.egolab.com



Test Report No. : EL260617GA003		EL 17-03/1131			Page No 2/2
S.No	Test Parameter	Units	Results	NAAQS 2009	Test Method
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m <sup>3</sup>	<0.5	01	IS:5182 (P-12) 2004
13	Mercury as particulate phase (HgP)	ug/m <sup>3</sup>	<0.001	--	IS 5182 Part 23/CPCB Method

Remarks (if any)

\*\*End of Report\*\*

Lab Incharge

For Eco Laboratories &amp; Consultants Pvt. Ltd

  
Authorized Signatory

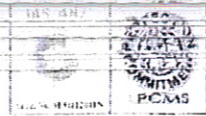


Eco Laboratories &amp; Consultants Pvt. Ltd.

NABL / MOEF / PPCB / HSPCB / BIS approved Laboratory

ISO - 9001 : 2008, 14001:2004 OHSAS-18001:2007

CIN : U74140PB2011PTC034739



ISO 9001:2008

**TEST REPORT**

Test Report No. : EL260617GA004	21/08/2017	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	23/06/2017 to 24/06/2017	
Sampling Location	Near Loco Shed	
Sampling Protocol	IS: 5182 (P-14) 2000, CPCB Guidelines and Customer's Requirements.	
Date of Receipt of Sample	26/06/2017	
Period of Analysis	26/06/2017 to 28/06/2017	
Date of Reporting	28/06/2017	
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 <sup>3</sup>	89	100	IS:5182 (P-23) 2004
2	Particulate Matter (PM 2.5)	µg/m <sup>3</sup>	41	60	Lab SOP No. EL/SOP/AAQ/01, Issue No. & Issue Date 03 & 01/01/2016
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	10.2	80	IS:5182 (P-2) 2001
4	Nitrogen Oxides (as NO <sub>2</sub> )	µg/m <sup>3</sup>	19.2	80	IS:5182 (P-6) 2006
5	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	23	400	Lab SOP No. EL/SOP/AAQ/02, Issue No. & Issue Date 03 & 01/01/2016
6	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	11	180	IS:5182 (Part-9) 1974 R2003
7	Carbon Monoxide (CO)	mg/m <sup>3</sup>	<1.5	04	Lab SOP No. EL/SOP/AAQ/03, Issue No. & Issue Date 03 & 01/01/2016
8	Lead (Pb)	µg/m <sup>3</sup>	<0.04	1.0	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01/01/2016
9	Arsenic (As)	ng/m <sup>3</sup>	<1	06	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01/01/2016
10	Nickel (Ni)	ng/m <sup>3</sup>	<10	20	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01/01/2016
11	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	<2	05	IS:5182 (P-11) 2006

PTO

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

Tel: 91-172-4112251, 9781301100, Fax: 91-172-4112252, Email: info@ecoindia.com, eco@ecoindia.com, www.ecoindia.com



Test Report No. :EL26C617GA004		11/17/2013			Page No. 2/2
S.No.	Test Parameter	Units	Results	NAAQS 2009	Test Method
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m3	<0.5	01	IS-5182 (P-12) 2004
13	Mercury as particulate phase (HgP)	ug/m3	<0.001	--	IS 5182 Part 23:CPCB Method

Remarks (if any)

\*\*End of Report\*\*

Lab Incharge

For Eco Laboratories &amp; Consultants Pvt. Ltd.

  
Authorized Signatory



EGO Laboratories & Consultants Pvt. Ltd.

NABL / MOEF / PPCB / HSPCB / BIS approved Laboratory

ISO - 9001 : 2008, 14001:2004 OHSAS-18001:2007

CIN : U74140PB2011PTC034739



ISO 9001:2008

## TEST REPORT



Test Report No. : EL260817GA005	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	23/06/2017 to 24/06/2017
Sampling Location	Near Storm Water Pump
Sampling Protocol	IS: 5182 (P-14) 2000, CPCB Guidelines and Customer's Requirements.
Date of Receipt of Sample	26/06/2017
Period of Analysis	26/06/2017 to 28/06/2017
Date of Reporting	28/06/2017
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 <sup>3</sup>	91	100	IS 5182 (P-23) 2004
2	Particulate Matter (PM 2.5)	µg/m <sup>3</sup>	46	60	Lab SOP No. EL/SOP/AAQ/01, Issue No. & Issue Date 03 & 01.01.2016
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	9.8	80	IS 5182 (P-2) 2001
4	Nitrogen Oxides (as NO <sub>2</sub> )	µg/m <sup>3</sup>	19	80	IS 5182 (P-6) 2006
5	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	20	400	Lab SOP No. EL/SOP/AAQ/02, Issue No. & Issue Date 03 & 01.01.2016
6	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	11	180	IS 5182 (Part-9) 1974 R2003
7	Carbon Monoxide (CO)	mg/m <sup>3</sup>	<1.5	04	Lab SOP No. EL/SOP/AAQ/03, Issue No. & Issue Date 03 & 01.01.2016
8	Lead (Pb)	µg/m <sup>3</sup>	<0.04	1.0	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01.01.2016
9	Arsenic (As)	ng/m <sup>3</sup>	<1	06	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01.01.2016
10	Nickel (Ni)	ng/m <sup>3</sup>	<10	20	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01.01.2016
11	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	<2	05	IS 5182 (P-11) 2006

PTO

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

TEL: 0172-5102211, 0172-5102139, FAX: 0172-5102139, Email: info@egoindia.com, web: www.egoindia.com



Test Report No. :EL260617GA005		01/07/2019			Page No. 2/2
S.No.	Test Parameter	Units	Results	NAAQS 2009	Test Method
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m3	<0.5	01	IS:5182 (P-12) 2004
13	Mercury as particulate phase (HgP)	ug/m3	<0.001	--	IS 5182 Part 23/CPCB Method

Remarks (if any)

\*\*End of Report\*\*

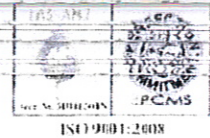
Lab Incharge

For Eco Laboratories &amp; Consultants Pvt. Ltd

  
Authorized Signatory



ECO Laboratories & Consultants Pvt. Ltd  
 NABL / MOEF / PPCB / HSPCB / BIS approved Laboratory  
 ISO - 9001 : 2008, 14001:2004 OHSAS-18001:2007  
 CIN : U74140PB2011PTC034739



## TEST REPORT



Test Report No. :EL260617GA006	SL 17-13/7946	Page No 1/2
Customer	Nabha Power Limited PO Box 28, Near Village-Naiash 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	23/06/2017 to 24/06/2017	
Sampling Location	Near Switch Yard	
Sampling Protocol	IS: 5182 (P-14) 2009, CPCB Guidelines and Customer's Requirements	
Date of Receipt of Sample	26/06/2017	
Period of Analysis	26/06/2017 to 28/06/2017	
Date of Reporting	28/06/2017	
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 <sup>3</sup>	90	100	IS 5182 (P-23) 2004
2	Particulate Matter (PM 2.5)	µg/m <sup>3</sup>	46	60	Lab SOP No. EL/SOP/AAQ/01, Issue No. & Issue Date 03 & 01 01 2016
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	10.1	80	IS 5182 (P-2) 2001
4	Nitrogen Oxides (as NO <sub>2</sub> )	µg/m <sup>3</sup>	18.1	80	IS 5182 (P-6) 2006
5	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	21	400	Lab SOP No. EL/SOP/AAQ/02, Issue No. & Issue Date 03 & 01 01 2016
6	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	12	180	IS 5182 (Part-9) 1974 R2003
7	Carbon Monoxide (CO)	mg/m <sup>3</sup>	<1.5	04	Lab SOP No. EL/SOP/AAQ/03, Issue No. & Issue Date 03 & 01 01 2016
8	Lead (Pb)	µg/m <sup>3</sup>	<0.04	1.0	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01 01 2016
9	Arsenic (As)	ng/m <sup>3</sup>	<1	06	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01 01 2016
10	Nickel (Ni)	ng/m <sup>3</sup>	<10	20	Lab SOP No. EL/SOP/AAQ/04, Issue No. & Issue Date 03 & 01 01 2016
11	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	<2	05	IS 5182 (P-11) 2009


PTO




Test Report No. : EL260617GAC06		11/11/2019			Page No. 2/2
S.No.	Test Parameter	Units	Results	NAAQS 2009	Test Method
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m <sup>3</sup>	<0.5	01	IS 5182 (P-12) 2004
13	Mercury as particulate phase (HgP)	ug/m <sup>3</sup>	<0.001	--	IS 5182 Part 23/CPCB Method

Remarks (if any)

\*\*End of Report\*\*

  
Lab Incharge

For Eco Laboratories &amp; Consultants Pvt. Ltd.

  
Authorized Signatory

Annexure - 3

JEE-2

<b>PUNJAB POLLUTION CONTROL BOARD</b>	
AIR LABORATORY HEAD OFFICE, PATIALA	
Email: airlabppcb@gmail.com	Telefax: 0175- 2302392

- |  |  |
|--|--|
| 1. Laboratory Sample No.                 | 157-158/ H.O.Lab./Air/Monitoring/2017-18   |
| 2. Name of Industry                      | M/s Nabha Power Limited, Vill- Nalash, Rajpura.                                  |
| 3. Name of Sample collecting Officer     | Er. Rajeev Gupta, A.E.E., Er. Mohit Bisht, J.E.E.,<br>Sh. Harpreet Singh, J.S.O. |
| 4. Designation of Authorizing Test       | EE, RO, Patiala  |
| 5. Type of Sample                        | Stack Emission   |
| 6. Date & Time of Sample Collection      | 22.05.2017   |
| 7. Date & Time of Sample receipt in Lab. | 23.05.2017   |
| 8. Point of Sample collection            | Details as Given Below   |

ਸ:ਦ:ਦਿ: - 1/2/3/S.A.  
ਨਵੀਂ ਡਾਕ

ਦਿ: ਦਿ:

ਡਾਟਿਕੋ ਨੰ. 2505 ਮਿਤੀ 31/5/17

Results

Point of Sample Collection	Parameter	Results
From Port hole on stack of Boiler I after APCD	Particulate Matter	45 mg/Nm <sup>3</sup>
From Port hole on stack of Boiler II after APCD	Particulate Matter	39 mg/Nm <sup>3</sup>



Scientific Officer  
(Air Laboratory)

Endst. No: 23124-25

Dt. 26/5/17

- A copy of the above is forwarded to the following for information and necessary action:-
1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office-I, Patiala.
  2. The Environmental Engineer, Punjab Pollution Control Board, Regional Office, Patiala.

Scientific Officer  
(Air Laboratory)