NABHA POWER LIMITED

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Ref: NPL/SKN/MOEF/ Dated : 15th July, 2013

To,

Mr. Surendra Kumar
Director (S),
Government of India,
Ministry of Environment & Forests
Northern Regional Office,
Chandigarh-160030, Punjab

Sub: 1400 MW Rajpura Thermal Power Project at village Nalash, District Patiala, Punjab by M/s Nabha Power Limited- Environmental Clearance regarding

Ref : Your Letter No J-13011/44/3008-IA.II(T) dated 15th Nov, 2010
Your Letter No J-13011/44/3008-IA.II(T) dated 03rd Oct, 2008
Our ref: NPL/SKN/MOEF/1072 dated 6th Jan, 2012
Our ref: NPL/SKN/MOEF/003 dated 28th May, 2011

Dear Sir,

With reference to the environmental clearance accorded to 2x700 MW Super Critical Thermal Power Plant, we are submitting herewith the Fifth half yearly compliance report detailing the status of the terms and condition mentioned in the aforesaid letters.

Thanking you,

Yours faithfully
For Nabha Power Limited

Suresh K Narang
Project Director

Cc to : The Environment Engineer, Punjab Pollution Control Board, Patiala.
The Scientist 'E' & Incharge, PAMS, CPCB, New Delhi.

COMPLIANCE OF MOEF CONDITIONS FOR NABHA POWER LTD.

S. No.	MoEF Condition	Compliance
1.	The total land requirement for the project shall be restricted to 1278 acres.	The land requirement for 1400 MW has been restricted up to 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 25th May,2009, Ref No. :No.21(7)/2008/D(Coord) & 22nd 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%.	Letter of Assurance (LOA) issued by SECL for Grade F coal on 11.12.2008 SECL/BSP/S&M/COMML/359/NPL/TPS(LOA)/3515. Sulphur & ash contents in the coal to be used in the power project after its commissioning shall be restricted below 0.5% & 34%.
4.	A bi-flue stack of height 275 m shall be provided with continuous online monitoring equipments for SOx, NOx & particulate matter. Exit velocity of flue gas should not be less than 25 m/sec.	Construction work of Stack (275m) is completed and flue can erection is in progress. CPM shall be installed after erection . Exit velocity of flue gas shall be maintained more than 25 m/sec.
5.	High efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure particulate emission doesn't exceed 50 mg/m^3.	The ESP having efficiency of 99.9% is being installed which will limit the outlet emission < 50 mg/Nm3. The precipitators will have 6 chambers and 9 fields in direction of gas flow.
6.	Space provision shall be kept for retrofitting for FGD, if required at later date.	Space provision for FGD has 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.	Dust suppression would be ensured through water spraying arrangement at suitable locations such as crusher house, loading & unloading stations, coal piles and transfer points etc. In addition, sprinklers will be provided in coal storage area to suppress the coal dust generated during stacking and reclaiming of coal.
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 construction work is going on. 100% utilization of fly ash shall be ensured from day one. Heavy metals shall be monitored in Ash pond.

9.	Ash pond shall be lined with HDPE lining. Adequate safety measures shall also be implemented to protect ash dyke from getting breached.	HDPE Lining Work of Ash pond bed (500 micron thick) over 50 mm thick sand cushion is going on. Top of HDPE liner will be 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.	Construction work of Two nos. Natural Draft Cooling Tower is going on. Blow down from cooling tower will be treated & recycled within plant as per the prescribed norms.
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 does not get mix.	Provision has already been made for separate collection/treatment of storm water and Plant effluents. The trade effluents shall confirm to the prescribed norms and shall be used as per the guidelines from PPCB.
12.	A Sewage Treatment Plant shall be provided and treated sewage shall be used for raising green belt/plantation.	Sewage treatment plant would be installed for the treatment of domestic waste water. The treated water shall be used for green belt/plantation development
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 scheme has already been approved by CGWA as per letter dated 05.12.2012 No. 4(156) PB/NWR/SD&I/2011 – 3041. Execution shall be made as per the Approved Plan.
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 adopted to check/minimize spontaneous fire in coal yard has been submitted to MOEF thro letter ref: NPL/SKN/MOEF/1423 dated: 28th June, 2012 and accordingly being implemented at site.
15.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of project.	Adequate arrangements have been made for the construction labour 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 site selection for storing LDO & HFO tanks has already been made after necessary risk assessment. On site and off site disaster management plan has been prepared for commissioning and shall be tested on regular basis thru mock drills after commissioning. Approval from CCOE obtained

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.	Presently ground water monitoring is being done at 3 locations to identify the baseline ground water quality. After the completion of the project, adequate number of ground water monitoring locations would be fixed near the ash pond area to check the ground water quality.
18.	A green belt of adequate width and density shall be developed around plant periphery covering about 1/3rd of project area preferably with local species.	Green belt of suitable width and density with local species will be provided.
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 declares its intention & commitment towards socio-economic development by providing various facilities to the nearby villages in the initial stages. Kindly refer **Annexure-I** for details.
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 shall be maintained well below the prescribed standards. Medical examination of the workers engaged in high noise area shall be examined on periodically.
22.	Regular monitoring of ground level concentration of SO_2, NOx, 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.	The Project is getting the ambient air quality monitoring done from Spectro Analytical Labs. Ltd. (an accredited lab from MoEF and NABL) on monthly basis. Three locations, one in the upwind direction, one in the downwind direction and the third in the cross wind direction have been selected. Emphasis for the following has also been given during selection of stations; • Construction activities presently being carried out • Future activity area to generate background AAQM data The Project is submitting the Periodic Report to Regional office of Ministry on Monthly Basis.
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	The NPL has already advertised in two local newspaper widely circulated in the region around the project. Copies of the advertisement are available with M/s Nabha Power Limited.

	website of the ministry of Environment and forests at http://envfor.nic.in.	
24.	A separate Environment Management Cell with qualified staff to be set up for implementation of the stipulated environmental safeguards.	Refer **Annexure – II** for details.
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.	The NPL is submitting the half yearly report on status of implementation of the stipulated conditions and environmental safeguards taken to the MoEF/MoEF Regional Office /CPCB / SPCB.
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.	The NPL is complying with the requirement.
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.	Total Budget is 861 Cr. Total expenditure till June, 2013 is 695 Cr. Refer **Annexure – III** for details.
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.	Date of Financial Closure : 12 Oct, 2010 Date of Commercial operation : 18 Jan, 2014 (Pre commissioning activities will start from Sept-2013)
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.	Agreed.
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	NPL website is live & the compliance reports & Monthly Environment Monitoring Reports are uploaded periodically on website.

	website and update periodically and also simultaneously send the same by email to regional office of Ministry of Environment and Forests.	Website address : http://www.Intnabhapower.com
32.	Critical pollutants levels including NOx, $RPSM_{10}$ and 2.5, SO_2 shall be regularly monitored and results displayed in your website and also at main gate of the power plant.	The industry is getting the ambient air quality monitoring done from Spectro Analytical Labs. Ltd. (an accredited lab from MoEF and NABL) on monthly basis. The results of the AAQM are displayed at the main gate of the NPL and are uploaded periodically on the website of the project.

Annexure-I

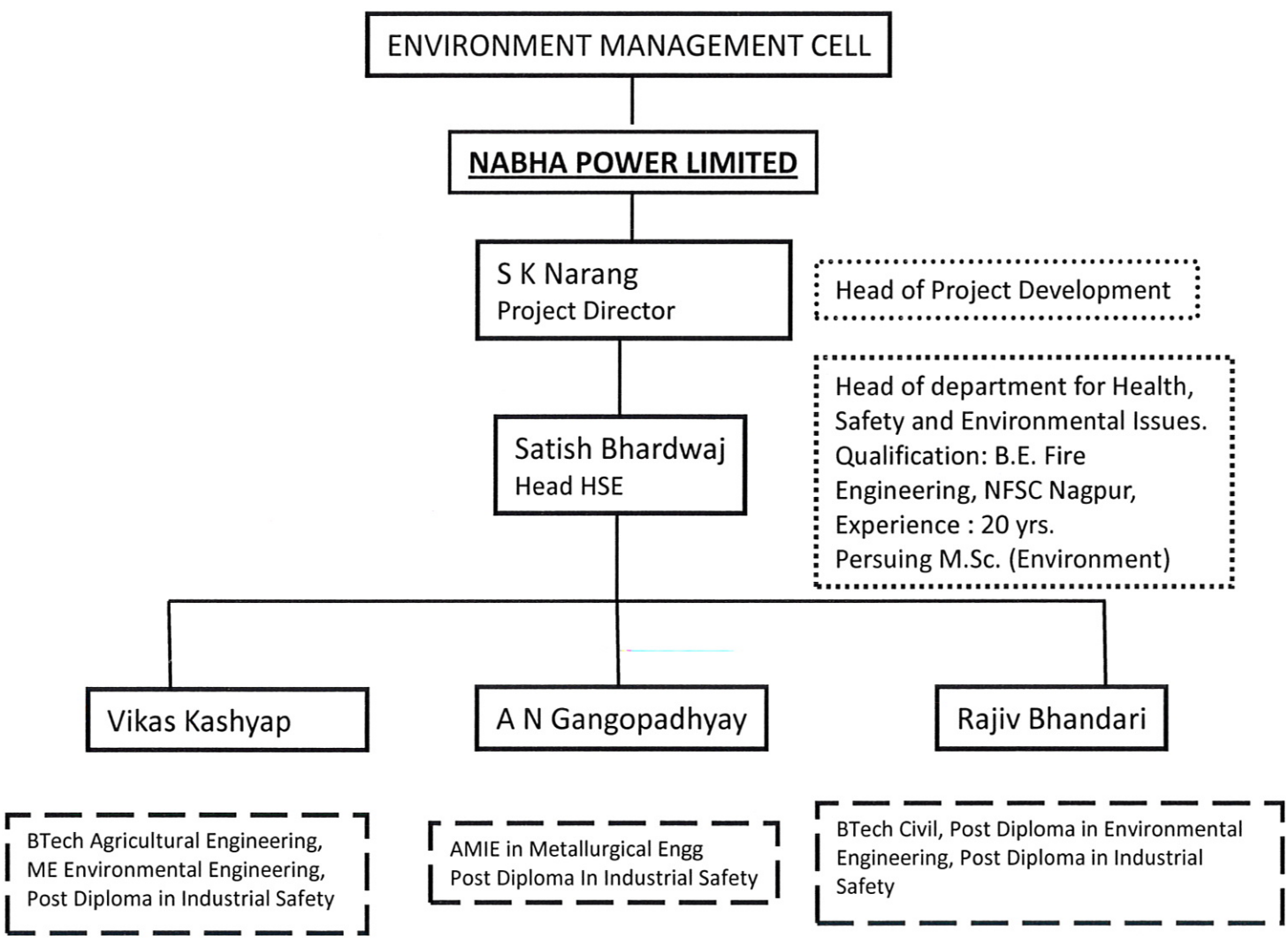
Corporate Social Responsibility (CSR) details

Period:-January 2013-June 2013

Sr.No.	Description	Spent/Committed
1	**Construction and Repair of Village Infrastructure like Roads, Culverts, Community Centers, School buildings, Aganwari Centers, Drinking Water Tanks, Cremation Grounds etc.**	**Rs.1,52,63,000/-**
2	**Shagan Scheme** Support of Rs.21,000/- for girl marriage in poor family from Sural Kalan , Sural Khurd ,Nalas Kalan , Nalas Khurd ,Rangian ,Kotla , Sadhror ,Rai Majra ,Haripur , Mirzapur,Chorti Kheri , Harna,Basantpura villages	**Rs. 4,71,000/-**
3	**Girl child scheme** Support of Rs.21, 000/- to newly born female child in term of Fixed deposit from Sural Kalan, Sural Khurd, Rangian, Nalash Khurd, Nalash Kalan, Kotla, Mirzapur, Chorti Kheri, Harna, Basantpura villages.	**Rs.4,95,000/-**
4	**Emergency Relief (Support to poor families in case of death or serious injuries of family member)**	**Rs.21,000/-**
5	**Skill Trainings for Girls at Village Sural Kalan and Rangian**	**Rs.2,05,000/-**
6	**Sponsorship of Child Rights Book published by District Administration**	**Rs.30,000/-**
7	- **Medical Assistance to needy families** - **Support to Civil Hospital Rajpura**	**Rs.2,14,000/-**
8	**Social gatherings and review meetings with village Panchayats**	**Rs.1,10,500/-**

Total Rs.1,68,09,500

Annexure – II


ENVIRONMENT MANAGEMENT CELL
NABHA POWER LIMITED
S K Narang
Project Director
Head of Project Development
Satish Bhardwaj
Head HSE
Head of department for Health, Safety and Environmental Issues.
Qualification: B.E. Fire Engineering, NFSC Nagpur,
Experience : 20 yrs.
Persuing M.Sc. (Environment)
Vikas Kashyap
A N Gangopadhyay
Rajiv Bhandari
BTech Agricultural Engineering, ME Environmental Engineering, Post Diploma in Industrial Safety
AMIE in Metallurgical Engg
Post Diploma In Industrial Safety
BTech Civil, Post Diploma in Environmental Engineering, Post Diploma in Industrial Safety

Annexure - III

COST PROVISION FOR ENVIRONMENTAL MEASURES

Project : Nabha Power Limited (2x700 MW)

S.No	Description	Cost (in Crores)	Expenditure till June, 2013 (in Crores)
1	Electro Static Precipitator (ESP)	370	325
2	Chimney	71	70.16
3	Cooling Tower incl. civil works	157	132.54
4	Ash Handling	168	123
5	Ash Dyke	47	15.88
6	Effluent Treatment Plant (ETP)	3	0.92
7	Dust Extraction & suppression system	5	0.75
8	Control of fire & explosion hazards	30	25.25
9	DM plant waste water treatment	3	0.45
10	Sewerage collection, treatment & disposal	2	0.3
11	Environmental lab. Equipments	0.01	0.0015
12	Green belt, Afforestation & landscaping	5	0.75
	TOTAL	**861.01**	**695.00**