

The Ministry of Environment & Forest accords the Environmental Clearance of Stage-I vide office order No. 14/13/81-Env dated November 25th 1981. .
(Stage-I)

Stage-1, MoEF Clearance has not imposed any conditions in the above said Environment Clearance of 6x210 MW=1260 MW Stage-I.

Monitoring the Implementation of Environmental Safeguards
Ministry of Environment & Forests
Western Region, Regional Office Bhopal

MONITORING REPORT PART-I
DATA SHEET

S. N.	Description	
1.	Project Type: River-valley/ Mining/ Industry/ Thermal/ Nuclear/ Other (specify)	Thermal
2.	Name of the project	Vindhyachal Super Thermal Power Project, Stage-II (2x500 MW)
3.	Clearance letter(s)/ OM No. and date	MoEF vide letter No. J-13007/32S7-IA.II dated 26.06.1993
4.	Location:	
	a) District(s)	Singrauli
	b) State(s)	Madhya Pradesh
	c) Location Latitude/ Longitude	Latitudes of 24 ⁰ 04'58" - 24 ⁰ 06'19" N and Longitudes 82 ⁰ 38'34" - 82 ⁰ 41'29" E
5.	Address for correspondence:	Executive Director, Vindhyachal Super Thermal Power Project, Vindhyanagar, Dist Singrauli, (M.P.) Pin 486885
	a) Address of the Concerned Project Chief Engineer (with Pin Code and Telephone/ Telex/ Fax numbers)	Executive Director, Vindhyachal Super Thermal Power Project, Vindhyanagar, Dist Singrauli, (M.P.) Pin 486885. Ph. 07805-247710, Fax 07805-247711
	b) Address of the Executive/Project Engineer/ Manager (With Pin Code & Telephone/ Telex/ Fax numbers)	Same as above
6.	Salient features:	
	a) Of the project	A Copy of Feasibility Report is already submitted.
	b) Of the Environmental Management Plans	A Copy of EIA/ EMP Report is already submitted.
7.	Break-up of the project area:	Total area of all stages of Vindhyachal project is 5800 acres.
	a) Submergence area: forest & non-forest	No submergence area and forest land involved
	b) Others	Existing land of VSTPP
8.	Breakup of the project affected population with enumeration of those losing houses/ dwelling units only agricultural land only. Both dwelling units and agricultural land and landless laborers/ artisans:	No additional land acquired for main plant & township. Hence no PAPs involved.
	a) SC, ST/ Adivasi	
	b) Others (Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures, if a survey is carried out give details & year of survey)	
9.	Financial details:Project cost as originally planned and subsequent revised estimates and the year of price reference:	Project Cost as on 31/03/2018 is Rs.2633.98 crores.
	a) Allocation made for environmental management plans with item wise and year wise break-up	--

	b) Benefit cost ratio/ internal rate of Return and the year of assessment	--
	c) Whether © includes the cost of environmental management as shown in the above	--
	d) Actual expenditure incurred on the project so far	--
	e) Actual expenditure incurred on the environmental management plans so far	--
10.	Forest land requirement:	No additional land acquired for main plant & township. Hence no forest land involved.
	a) The status of approval for diversion of forest land for non forestry use	
	b) The status of clearing felling	
	c) The status of compensatory afforestation, if any	
	d) Comments on the viability & sustability of compensatory afforestation programme in the light of actual field experience so far.	
11.	The status of clear felling in non-forest area (such as submergence area or reservoir, approach roads), if any with quantitative information required.	---
12.	Status of Construction (actual and/or planned)	
	a) Date of commencement (actual and/or planned)	Date of Main Plant Award 13.06.1995
	b) Date of completion (Actual and/or planned)	In year 2002
13.	Reason for the delay in the project is yet to start.	-

**The Ministry of Environment & Forest accords the Environmental Clearance of Stage-II under the provision of EIA Notification subject to implementation of the following terms and conditions.
(Stage-II)**

S.No	Conditions	Status/Action taken
(i)	Electrostatic Precipitators having an operational efficiency not less than 99.70 % should be installed so as to ensure particulate emissions are not exceeding 150mg/Nm ³ .	Electrostatic Precipitators (ESPs) is in operation having the efficiency of 99.96 %. ESP R&M is done to bring down the stack emission below 75mg/Nm ³ .
(ii)	A twin flue stack of 275 meters height should be provided	A twin flue stack of 275 m. height have been provided for wider dispersal of the particulate & gaseous emissions.
(iii)	Space for flue gas desulphurization (FGD) plant. The same will be installed if required from environmental. The need and requirement of FGD system will be decided by ministry based on the report of the technical committee constituted by this ministry.	Space has been provided as per condition stated. NIT done for FGD installation.
(iv)	Cooling tower of adequate capacity and size will be installed so that there is no discharge of cooling towers.	Closed cycle Cooling system of 100% capacity have been installed for each unit.
(v)	The bleed from the boiler house and cooling towers, effluents from DM plant will be fully treated so that the treated effluent conforms to the standards prescribed by SPCB, Central Government, whichever are there.	NTPC Vindhyachal is having the effluent treatment plant for treatment of plant effluent and treated effluents are being recycled in the plant premises.
(vi)	Effluent from the ash ponds from Stage-I & II shall be totally recirculated within the plant. Adequate mechanism of air and water quality including ground water monitoring system will be setup at different locations in and around the plant. The location of these monitoring stations should be installed in consultation with SPCB/ Indian Metrological department. The monitored data of air and water quality should be furnished to the ministry and SPCB once in three months.	NTPC Vindhyachal has installed a dedicated ash water recirculation system for 100% recirculation of ash water. Four Ambient Air quality monitoring station and Four Effluent quality monitoring station have been set up to monitor air and effluent water quality. Ground water monitoring is also being done through off- line testing on regular basis.
(vii)	The stack will be provided with automatic monitoring equipments for measuring and recording of sulphur di-oxides and oxides of nitrogen.	CEMS has been installed for on line monitoring of SPM/SO _x /NO _x .
(viii)	The request of the project authorities for their ash pond near the Govind Ballabh Pant lake is not considered due to result in pollution problem, due to leachates from the ash ponds. In view of this project authorities are requested to suggest alternate locations for ash disposal purpose. The suggestion will be examined separately and decision taken later on.	Separate clearance has been obtained.
(ix)	Adequate measure for control of noise due to operations within different plant units should be taken. The noise level should confirm to the standards prescribed by the Ministry under the Environment Protection Act.	Acoustic enclosures have been provided to control the noise level below regulatory norms & personal protective equipment have been provided wherever it is not possible to control the noise level. Regular monitoring of all the environmental parameters is being carried out & Noise level is also being complied as per norms.

(x)	Precautionary measure for control of fire and explosion hazards arising due to transportation, use of storage of coal and oil should be taken.	Comprehensive fire detection & protection system is installed for the complete power station. NTPC Vindhyachal has the onsite emergency plan for mitigation of control of fire and explosion hazards arising due to transportation, use of storage of coal and oil.
(xi)	A greenbelt development plan covering the entire area of the Super Thermal Power Station should be prepared and submitted to this ministry within six months time. The plants species selected should be based on the local area and should give maximum green cover. The species so selected should be less sensitive as well as resistant variations of emission of Sulphur di-oxides.	Every year, NTPC Vindhyachal is planting 25000 nos of tree in and around the plant area. Additionally, 50000 trees are also planted every year through MPRVVN for which an MOU has been signed with them for next ten years (from 2016-17). In current financial year 2018-19, 85000 saplings have been planted by NTPC-Vindhyachal. NTPC-Vindhyachal has developed the green belt around the plant as well as in the ash dyke area. Till date we have planted more than 23 lakh trees.
(xii)	They should carry out regular monitoring of flora and fauna, fisheries and bottom sediments of the lake to monitor the impact of the ash pond effluents of other units of National Thermal Power Corporation.	Inventorization study for the industries operating around the Rihand Reservoir periphery to ascertain the effluent getting discharged directly in the water body and also carry out air emission inventory within 15 km radius of Rihand Reservoir is awarded to M/S Vimta Lab Limited, Haidarabad dated 27.07.2016. Work is in progress.
(xiii)	The detailed Rehabilitation plan should be prepared with regard to those displaced persons due to the location of the Vindhyachal power station and its full implementation within one year.	Provision has been kept as per condition stated.
(xiv)	An environmental cell should be setup with laboratory facilities to look in to the implementation of various conditions mentioned above. Adequate financial setup should be made for implementation of these stipulations.	An Environmental cell has been created at the project site with HOD at the level of AGM that is looking after compliance of conditions stipulated.
(xv)	The Project authorities will submit the detailed Environmental Impact Assessment report for this Singrauli region by January 1991. Any other provision stipulated by this ministry after examination of this region	Environmental Impact Assessment report Submitted as per your directions.
(xvi)	The conditions stipulated above may be varies or new ones imposed. The clearance may revoke in the event of non-implementation of the conditions above.	Agreed
(xvii)	The stipulation will be enforced amongst others under Water Act 1974 and Air act 1981 and the environment protection act 1986 or other subsequent amendments.	Agreed

Monitoring the Implementation of Environmental Safeguards
Ministry of Environment & Forests
Western Region, Regional Office Bhopal

MONITORING REPORT PART-I
DATA SHEET

S. N.	Description	
1.	Project Type: River-valley/ Mining/ Industry/ Thermal/ Nuclear/ Other (specify)	Thermal
2.	Name of the project	Vindhyachal Super Thermal Power Project, Stage-III (2x500 MW)
3.	Clearance letter(s)/ OM No. and date	MoEF vide letter No. J-13011/07/2001/IS.II (T) dated 19.0.2002
4.	Location:	
	a) District(s)	Singrauli
	b) State(s)	Madhya Pradesh
	c) Location Latitude/ Longitude	Latitudes of 24 ⁰ 04'58" - 24 ⁰ 06'19" N and Longitudes 82 ⁰ 38'34" - 82 ⁰ 41'29" E
5.	Address for correspondence:	Executive Director, Vindhyachal Super Thermal Power Project, Vindhyachal, Dist Singrauli, (M.P.) Pin 486885
	a) Address of the Concerned Project Chief Engineer (with Pin Code and Telephone/ Telex/ Fax numbers)	Executive Director,, Vindhyachal Super Thermal Power Project, Vindhyachal, Dist Singrauli, (M.P.) Pin 486885. Ph. 07805-247710, Fax 07805-247711
	b) Address of the Executive/Project Engineer/ Manager (With Pin Code & Telephone/ Telex/ Fax numbers)	Same as above
6.	Salient features:	
	a) Of the project	A Copy of Feasibility Report is already submitted.
	b) Of the Environmental Management Plans	A Copy of EIA/ EMP Report is already submitted.
7.	Break-up of the project area:	Total area of all stages of Vindhyachal project is 5800 acres.
	a) Submergence area: forest & non-forest	No submergence area and forest land involved
	b) Others	Existing land of VSTPP
8.	Breakup of the project affected population with enumeration of those losing houses/ dwelling units only agricultural land only. Both dwelling units and agricultural land and landless laborers/ artisans:	No additional land is proposed to be acquired for main plant & township. Hence no PAPs involved.
	a) SC, ST/ Adivasi	
	b) Others (Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures, if a survey is carried out give details & year of survey)	
9.	Financial details:Project cost as originally planned and subsequent revised estimates and the year of price reference:	Project Cost as on 31/03/2018 is Rs.4035.17 Crores.
	a) Allocation made for environmental management plans with item wise and year wise break-up	--

	b) Benefit cost ratio/ internal rate of Return and the year of assessment	--
	c) Whether © includes the cost of environmental management as shown in the above	--
	d) Actual expenditure incurred on the project so far	--
	e) Actual expenditure incurred on the environmental management plans so far	--
10.	Forest land requirement:	No additional land is proposed to be acquired for main plant & township. Hence no forest land involved.
	a) The status of approval for diversion of forest land for non forestry use	
	b) The status of clearing felling	
	c) The status of compensatory afforestation, if any	
	d) Comments on the viability & suitability of compensatory afforestation programme in the light of actual field experience so far.	
11.	The status of clear felling in non-forest area (such as submergence area or reservoir, approach roads), if any with quantitative information required.	---
12.	Status of Construction (actual and/or planned)	
	a) Date of commencement (actual and/or planned)	Date of Main Plant Award 03.05.2003
	b) Date of completion (Actual and/or planned)	In year 2007
13.	Reason for the delay in the project is yet to start.	-

The Ministry of Environment & Forest accords the Environmental Clearance of Stage-III under the provision of EIA Notification 2006 subject to implementation of the following terms and conditions. (Stage-III)

S.N	Conditions	Status/Action taken
(i)	All the conditions stipulated by MPPCB vide their letter no. 7937/TS/MPPCB/2001 dated 1st June 2001 should be strictly implemented including the stipulation that industry shall not discharge any treated effluent into the river or any surface water body.	All the treated effluent is being recycled & reused for various purposes in the plant.
(ii)	The Expansion unit should be constructed within the premises of Vindhyachal station. No additional land should be acquired for any project related activity.	A total area of 5378 acres of land was acquired for the project in Stage –I. The plant facilities & township for this expansion stage has been accommodated within the land acquired during Stage-I of the project.
(iii)	A twin flue stack of 275 meters height should be provided with continuous on line monitoring equipments and data collected should be analyzed and submitted regularly. Exit velocity of 22m/s should be maintained as the predictions for incremental ground level concentrations are based on this value.	A twin flue stack of 275 m. height have been provided for wider dispersal of the particulate & gaseous emissions.
(iv)	Consumptive water requirement to the tune of 104520 m ³ /day should be drawn from discharge channel of Singrauli Super thermal Power Station of NTPC. The consumption of the station should not exceed 80 cu sec as permitted by the irrigation department, Government of Madhya Pradesh. Closed circuit cooling towers should be incorporated in the design of the project , as stipulated by MPPCB, no treated water should be discharged outside the plant premises or surface water bodies.	As per water present water agreement with irrigation department, NTPC Vindhyachal is allowed to draw 160 cusecs of water and the same is complied with.
(v)	Water Quality should be monitored in different streams and in the Central Monitoring Basin before its use for afforestation, dust separation.	Third party monitoring (through M/S Ecomen) is being done at different locations.
(vi)	Coal should be used @ 4.7 MP per annum with a maximum ash content of 45% and sulphide content not exceeding 0.3%. fuel for the project should be transported from Nighai Coal Mines only through MGR system.	Average ash content in coal is 33.67% & Sulphur content is 0.38% in coal.
(vii)	Fly ash generated to the tune of 5813.48 TPD should be used in accordance with the provision of fly ash Utilization Notification of September 1997. Ash generated from Stage-III to the tune 15MM ³ should be utilized in various activities such as brick making construction of roads, back filling of mines etc.	Total 178010 MT ash utilized in ash brick manufacturing , Cement & Asbestos industries for F.Y. 2017-18.
(viii)	Presently an area of 904 acres has been approved for ash disposal from existing units of 2260 MW capacity. For accommodating the fly ash from existing and proposed expansion units, an additional area of 576 acres in V3 lagoon should be utilized. No earth should be removed from the existing and proposed ash lagoons for construction of starter dyke or in its raising to maintain impervious soil layer for avoiding contamination of ground water. NTPC should ensure that fly ash is disposed of only in designated areas and not in low lying areas in and around project premises as has been done in case of existing operating units. Violations of this type should be totally stopped.	Complied.
(ix)	Continuous monitoring of ground water quality around the ash disposal area should be undertaken	Regular monitoring of ground water around the ash pond

	to ascertain change in water quality due to leaching from ash pond area. Proper care should be taken to ensure that the natural drainage of the area is not affected and that there are no stagnant water bodies outside the ash dyke.	area, including heavy metals (As, Hg, Cr, Pb), is being done through an approved Laboratory from Ministry of Environment, Forest and Climate Change..
(x)	As per risk analysis report, efforts should be made to have minimum inventory of secondary fuel and other chemicals required for operations of the plant. A programme of mock drills should be prepared and regularly conducted to train the employees to handle effectively eventuality. Safety alarm devices should be installed at strategic points including main gate, assembly points, first aid center etc.,	Inventory of secondary fuel and other chemicals required for Plant operation is minimized to the extent possible taking care the plant operation is not compromised. The plant has been provided with adequate automated fire protection system, Fully equipped CISF manned central fire control station is in place. NTPC Vindhyachal has the onsite & off site emergency plan for mitigation of control of fire and explosion hazards arising due to transportation, use of storage of coal and oil. Mock drills are conducted regularly to plug the gaps, if any, in the emergency planning and response system.
(xi)	Noise level should be limited to 75 dBA and regular maintenance of equipment is undertaken. For people working in the area of generator halls and other high noise areas, earplug should be provided.	Acoustic enclosures have been provided to control the noise level below regulatory norms & personal protective equipment have been provided wherever it is not possible to control the noise level. Regular monitoring all the environmental parameters is being carried out & Noise level is also being complied as per norms.
(xii)	For controlling the fugitive dust, regular sprinkling of water in vulnerable areas of the plant should be ensured.	Complied. All the interlinking road, inside plant premises & township has been made pucca and water sprinkling is done in other areas.
(xiii)	A greenbelt of at least 50m width should be created around the expansion unit and particularly in areas like coal handling plant, coal crushed/uncrushed sock yard, which are prone to fugitive dust. At least 1/3 rd area of the project should be brought under greenbelt with tree density of 1500-2000 trees per ha. In addition a greenbelt of 20-30 m should be created around the ash disposal V3 lagoon. Plantation should be immediately undertaken over the areas where fly ash has been dumped outside the designated areas particularly in the periphery of the reservoirs and along cooling water outfall channel of Singrauli STPP. A programme to this effect should be submitted to the ministry within two months	Every year, NTPC Vindhyachal is planting 25000 nos of tree in and around the plant area. Additionally, 50000 trees are also planted every year through MPRVVN for which an MOU has been signed with them for next ten years (from 2016-17). In current financial year 2018-19, 85000 saplings have been planted by NTPC-Vindhyachal. NTPC-Vindhyachal has developed the green belt around the plant as well as in the ash dyke area. Till date we have planted more than 23 lakh trees.
(xiv)	The pollution control equipments and online monitoring system should be immediately made operational for the operating units and the analysis report should be submitted to the ministry within three months. A confirmation on the functioning of online monitoring system for all the operating units should be immediately submitted.	Online monitoring of AAQMS has been operational since year 2009 and connected to MPPCB/CPCB servers for online monitoring. CEMS (Continuous Emission Monitoring Systems) for stacks for monitoring of SPM, Sox, NOx have been installed and system has been connected to MPPCB/CPCB servers.

(xv)	NTPC should initiate a coordinated project for preparation of an inventory of industries operating around the Rihand reservoirs periphery to ascertain the effluents getting discharged directly or indirectly in to the water body. The exercise should be extended emission inventory of pollution resources in the region which could be serve as baseline for future projects in the area. In this exercise NTPC may like to involve NGOs like Banvasi Sewa Ashram working in the area on environmental aspects.	Inventorization study for the industries operating around the Rihand Reservoir periphery to ascertain the effluent getting discharged directly in the water body and also carry out air emission inventory within 15 km radius of Rihand Reservoir is being done through M/s Vimta Labs Limited, Hyderabad.Three seasonal monitoring, completed.
(xvi)	Regular monitoring of SPM, SO2 and NOx around the power plant should be carried out and records maintained. Monitoring station should be established in consultation with the SPCB, Since maximum concentration is expected south -west direction, a monitoring stain should be installed in this in this segment.	Provision is as per condition stated. NTPC Vindhyachal has installed 4 nos of AAQMS in all four directions in consultation with MPPCB, all the data are connected to CPCB/MPPCB for on online monitoring.
xvii)	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded Environmental Clearance and copies of the clearance are available with the state pollution control board/committee and may also be seen at website of Ministry of Environment and Forests at HTTP://environmental .	Already done. Advertisement has been published in different newspaper as per condition stated.
(xviii)	A monitoring committee should be constituted for reviewing compliance of various safeguard measures by involving recognized local NGOs, Pollution Control Board, Institutions Experts, etc.,	Functioning of pollution control devices is under real time continuous monitoring. Air quality, stack parameters and effluent parameters already made available to MPPCB/CPCB for real time monitoring.
(xix)	The project authorities should inform the Regional office as well as the ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work.	Already done.
(xx)	Full cooperation shall be extended to the Scientists/Officers from the Ministry/Regional Office of the Ministry at Bhopal/the CPCB/ the SPCB who would be monitoring the compliance of Environmental status. A complete set of revised impact assessment report and management plan incorporating the changes made during appraisal of the project and commitments made from time to time should be forwarded to MOEF and to the Regional Office within two months for their use during monitoring.	A complete set of revised impact assessment report and management plan has been submitted to MoEF/MPPCB as per condition stated.

Monitoring the Implementation of Environmental Safeguards
Ministry of Environment & Forests
Western Region, Regional Office Bhopal

MONITORING REPORT PART-I
DATA SHEET

S. N.	Description	
1.	Project Type: River-valley/ Mining/ Industry/ Thermal/ Nuclear/ Other (specify)	Thermal
2.	Name of the project	Vindhyachal Super Thermal Power Project, Stage-IV (2x500 MW)
3.	Clearance letter(s)/ OM No. and date	MoEF vide letter No. J-13011/56/2008/-IA.II (T) dated 05.02.2009
4.	Location:	
	a) District(s)	Singrauli
	b) State(s)	Madhya Pradesh
	c) Location Latitude/ Longitude	Latitudes of 24 ⁰ 02'45" - 24 ⁰ 03'00" N and Longitudes 82 ⁰ 38'00" - 82 ⁰³⁹ '25" E
5.	Address for correspondence:	Executive Director, Vindhyachal Super Thermal Power Project, Vindhyanagar, Dist Singrauli, (M.P.) Pin 486885
	a) Address of the Concerned Project Chief Engineer (with Pin Code and Telephone/ Telex/ Fax numbers)	Executive Director,, Vindhyachal Super Thermal Power Project, Vindhyanagar, Dist Singrauli, (M.P.) Pin 486885. Ph. 07805-247710, Fax 07805-247711
	b) Address of the Executive/Project Engineer/ Manager (With Pin Code & Telephone/ Telex/ Fax numbers)	Same as above
6.	Salient features:	
	a) Of the project	A Copy of Feasibility Report is already submitted.
	b) Of the Environmental Management Plans	A Copy of EIA/ EMP Report is already submitted.
7.	Break-up of the project area:	Total area of all stages of Vindhyachal project is 5800 acres.
	a) Submergence area: forest & non-forest	No submergence area.
	b) Others	Existing land of VSTPP
8.	Breakup of the project affected population with enumeration of those losing Houses / dwelling units only agricultural land only. Both dwelling units and agricultural land and landless laborers/ artisans:	No additional land is proposed to be acquired for main plant township. Hence no PAPs involved.
	a) SC, ST/ Adivasi	
	b) Others (Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures, if a survey is carried out give details & year of survey)	
9.	Financial details:Project cost as originally planned and subsequent revised estimates and the year of price reference:	Project Cost as on 31.03.2018 is Rs.6329.58 Crores.
	a) Allocation made for environmental management plans with item wise and	--

	year wise break-up	
	b) Benefit cost ratio/ internal rate of Return and the year of assessment	--
	c) Whether © includes the cost of environmental management as shown in the above	Yes
	d) Actual expenditure incurred on the project so far	--
	e) Actual expenditure incurred on the environmental management plans so far	--
10.	Forest land requirement:	No additional land is proposed to be acquired for main plant & township. Hence no forest land involved.
	a) The status of approval for diversion of forest land for non forestry use	
	b) The status of clearing felling	
	c) The status of compensatory afforestation, if any	
	d) Comments on the viability & sustability of compensatory afforestation programme in the light of actual field experience so far.	
11.	The status of clear felling in non-forest area (such as submergence area or reservoir, approach roads), if any with quantitative information required.	---
12.	Status of Construction (actual and/or planned)	
	e) Date of commencement (actual and/or planned)	Date of Main Plant Award is 01.7.2009
	f) Date of completion (Actual and/or planned)	01/03/2014
13.	Reason for the delay in the project is yet to start.	-

The Ministry of Environment & Forest accords the Environmental Clearance of Stage-IV under the provision of EIA Notification 2006 subject to implementation of the following terms and conditions. (Stage-IV)

S.No	Conditions	Status/Action taken
(i)	Total land requirement for all the activities of the project shall not be exceed 600 acres.	Till now total 572 Acres land acquired.
(ii)	Prior forestry clearance shall be obtained for the forest land involved in the project, if any.	Application for diversion of 18.127 hec forest clearance obtained.
(iii)	Ash pond shall be at least 500 m away from FRL of Govind Ballabh pant Sagar (Rihand reservoir) . The land shall be free from m arshy/waterlogged area.	Ash pond is more than 500 mts away from FRL of Rihand reservoir.
(iv)	Sulphur and ash content in the coal to be used in the project shall not be exceed 0.4% and 35 % respectively at any given time.	Average ash content in coal is 33.67% & Sulphur content is 0.38% in coal.
(v)	A bi-blue stack of 275 m height shall be provided with continuous online, monitoring equipments for Sox, NOx, Hg, and Particulate. Exit velocity of flue gas shall not be less than 22 m/s	A twin flue stack of 275 m. height have been provided for wider dispersal of the particulate & gaseous emissions.
(vi)	The High efficient Electrostatic Precipitators (ESP) shall be installed to ensure that particulate emission does not exceed 50mg/Nm ³	ESP design particulate emission is < 50mg/Nm ³ and the emission level is maintained below that.
(vii)	The Particulate emission from existing units of stage-I,II and III shall be brought down to 75 mg/Nm ³ and this modification should be completed before commissioning of stage-IV	ESP R & M of stage-I is in progress. Emission level reduced to below 100 mg/Nm ³ . ESP R & M of stage-II completed and emission level brought down to the level of 75 mg/Nm ³ . Emission level of Stage-III are below 75 mg/Nm ³ .
(viii)	Space Provision shall be kept for retrofitting of FGD, if required at a later date.	Provision is kept as per condition stated. Contract for installation of FGD awarded.
(ix)	Adequate dust extraction system such as cyclones /bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	Provision is as per condition stated.
(x)	Fly Ash shall be collected in dry form and storage facilities (silos) shall be provided. The provisions stipulated in the fly ash notifications of September 1999 and its amendment in august, 2003 in regard to fly ash utilization shall be adhered to. Unutilized fly ash and bottom ash shall be disposed off in the ash pond duly lined to avoid any ground water contamination.	Provision is as per condition stated. Dry Ash Extraction System is under installation. Ash pond lining done before start of discharge.
(xi)	Closed cycled cooling system with cooling towers shall be provided. COC of at least 4 shall be adopted and the effluents shall be treated as per the prescribed norms.	Provision is as per condition stated.
(xii)	The treated effluents confirming to the prescribed standards shall be re-circulated and reused within the plant. Arrangement shall be made that effluents and storm water do not get mixed.	Provision is as per condition stated. Contract for Storm water drain separation for the whole station under award.
(xiii)	A sewage treated plant shall be provided and the treated sewage shall be reused for raising greenbelt/plantation.	Provision is as per condition stated. NTPC Vindhyachal has one no. of STP; the treated effluent of STP is being recycled for the horticulture purposes.
(xiv)	Rainwater harvesting should be adopted. Central ground water authority /Board shall be	Feasibility study has been carried out by M/s Rajmi

	consulted for finalization of appropriate rainwater harvesting technology within a period of three months from the date of clearance and details shall be furnished.	Exploration & Engg Ltd, Indore in consultation with Central ground water authority Bhopal.
(xv)	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of the these measure with full details alongwith location plant layout shall be submitted to the ministry as well as to the regional office of the ministry at Bhopal	The plant has been provided with adequate automated fire protection system. Fully equipped CISF manned central fire control station is in place. NTPC Vindhyachal has the onsite & off site emergency plan for mitigation of control of fire and explosion hazards arising due to transportation, use of storage of coal and oil.
(xvi)	Storage facilities for auxiliary liquid fuel such as LDO and/HFO/LSHS shall be made in the plant area where risk is minimum to the storage facilities. Disaster management plan shall be prepared to meet any eventuality in case of an accident taking place. Mock drill shall be conducted regularly and based on the same, modifications required, if any shall be incorporated in the DMP. Sulphur content in the liquid fuel shall not exceed 0.5%.	Provision is as per condition stated. NTPC Vindhyachal has the disaster management approved by the nation safety council for any kind of emergency plan y in case of an accident taking place. Mock drill is conducted regularly and observations, if any, are taken care of.
(xvii)	Regular monitoring of ground water in and around the ash pond area including heavy metals (As, Hg, Cr, Pb) shall be carried out, records maintained and six monthly report shall be furnished to Regional office of the ministry.	Regular monitoring of ground water around the ash pond area, including heavy metals (As, Hg, Cr, Pb), is being done through an approved Laboratory from Ministry of Environment, Forest and Climate Change.
(xviii)	A green belt of adequate width and density shall be developed around the plant periphery covering 1/3 rd of project area preferably with local species.	Every year, NTPC Vindhyachal is planting more than 25000 nos of tree in and around the plant area. Additionally, 50000 trees are also planted every year through MPRVVN for which an MOU has been signed with them for next ten years (from 2016-17). In current financial year 2018-19, 85000 saplings have been planted by NTPC-Vindhyachal. NTPC-Vindhyachal has developed the green belt around the plant as well as in the ash dyke area. Till date we have planted more than 23 lakh trees.
(xix)	Adequate funds shall be allocated for undertaking CSR activities.	Provision is as per condition stated.
(xx)	First aid and sanitation arrangement shall be made for the drivers and other contract workers during construction phase.	Provision is as per condition stated.
(xxi)	Noise level emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75dBA. For people working in the high noise area, requisite personal protective equipments like earplugs/ear muffs etc., shall be provided. Workers engaged in nosy areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for treatment of any hearing loss including shifting to non nosy /less nosy areas.	Acoustic enclosures have been provided to control the noise level below regulatory norms & personal protective equipment have been provided wherever it is not possible to control the noise level. Regular monitoring all the environmental parameters is being carried out & Noise level is also being complied as per norms. Regular health checkup of all employees is also being done.

(xxii)	Regularly monitoring of ambient air quality in the impact zone shall be carried out and records maintained. In case the air quality levels exceed the prescribed standards, necessary corrective measure shall be taken.	Continuous Ambient air monitoring system is installed for monitoring and data is being sent regularly to MPPCB/CPCB.
(xxiii)	Regular monitoring of ground level concentration of SO ₂ , NO _x , SPM and RSPM shall be carried out in the impact zone and records maintained. If any stage these level are found to be exceed the prescribed limits, necessary control measures shall be provided immediately. The locations of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to Regional Office of the Ministry.	Provision is as per condition stated.
(xxiv)	A detailed plan for the health monitoring in the area within the impact zone shall be prepared and implemented along with local administration. The plan should be besides others, also provides for monitoring of respiratory disorders. The plan should be submitted within three months to the Ministry and its Regional Office at Bhopal.	Health Impact survey already carried out and report submitted. It addition to this another Human health risk assessment study has been completed by M/s FICCI. Regular health camps are being organized in the NTPC Hospital which provide free checkup for all.
(xxv)	Provision shall be made for the housing of construction labours within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, etc., The housing may be in the form of temporary structures to be removed after the completion of the project.	Provision is as per condition stated.
(xxvi)	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded Environmental Clearance and copies of the clearance are available with the state pollution control board/committee and may also be seen at website of Ministry of Environment and Forests at http://envfor.nic.in .	Already done.
(xxvii)	A separate environment management cell with qualified staff shall be setup for implementation of the stipulated environmental safeguards.	An Environmental cell has been created at the project site with HOD at the level of AGM .
(xxviii)	Half yearly report to the status of implementation of the stipulated conditions and environmental safeguards shall be submitted to the ministry/Regional Office/CPCB/SPCB.	Being sent
(xxix)	Regional office of the ministry of Environment and Forests located at Bhopal will monitor the implementations of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment management plan alongwith additional Information submitted from time to time shall be forwarded to the regional office for their use during monitoring. The project proponent will upload the compliance status in their website and update the same from time to time (at least six monthly). Criteria pollutants levels (stack and Ambient levels) will be displayed at the main gate of the power plant.	Already done.
(xxx)	Separate fund shall be allocated for implementation of Environmental protection measure along with item-wise breakup. These cost shall be included as part of the project cost. The funds earmarked for the environmental protection measures shall not be diverted for other purposes. And year wise expenditure should be report to the Ministry.	Provision is as per condition stated.
(xxxi)	The project authorities shall inform the Regional office as well as the ministry regarding date of financial closure and final approval of the project by the concerned authorities and the dates of	Provision is as per condition stated.

	start of land development work and commissioning of plant.	
(xxxii)	Full cooperation shall be extended to the Scientists/Officers from the Ministry/Regional Office of the Ministry at Bhopal/the CPCB/ the SPCB who would be monitoring the compliance of Environmental status.	Provision is as per condition stated.

Monitoring the Implementation of Environmental Safeguards
Ministry of Environment & Forests
Western Region, Regional Office Bhopal

MONITORING REPORT PART-I
DATA SHEET

S. N.	Description	
1.	Project Type: River-valley/ Mining/ Industry/ Thermal/ Nuclear/ Other (specify)	Thermal
2.	Name of the project	Vindhyachal Super Thermal Power Project, Stage-V (1x500 MW)
3.	Clearance letter(s)/ OM No. and date	MoEF vide letter No. J-13012/06/2009/-IS.II (T) dated 02.05.2012
4.	Location:	
	a) District(s)	Singrauli
	b) State(s)	Madhya Pradesh
	c) Location Latitude/ Longitude	Latitudes of 24 ⁰ 04'58" - 24 ⁰ 06'19" N and Longitudes 82 ⁰ 38'34" - 82 ⁰ 41'29" E
5.	Address for correspondence:	Executive Director, Vindhyachal Super Thermal Power Project, Vindhyanagar, Dist Singrauli, (M.P.) Pin 486885
	a) Address of the Concerned Project Chief Engineer (with Pin Code and Telephone/ Telex/ Fax numbers)	Executive Director,, Vindhyachal Super Thermal Power Project, Vindhyanagar, Dist Singrauli, (M.P.) Pin 486885. Ph. 07805-247710, Fax 07805-247711
	b) Address of the Executive/Project Engineer/ Manager (With Pin Code & Telephone/ Telex/ Fax numbers)	Same as above
6.	Salient features:	
	a) Of the project	A Copy of Feasibility Report is already submitted.
	b) Of the Environmental Management Plans	A Copy of EIA/ EMP Report is already submitted.
7.	Break-up of the project area:	Total area of all stages of Vindhyachal project is 5800 acres including Stage -V (1x500MW).
	a) Submergence area: forest & non-forest	No submergence area and forest land involved.
	b) Others	Existing land of VSTPP
8.	Breakup of the project affected population with enumeration of those losing houses/ dwelling units only agricultural land only. Both dwelling units and agricultural land and landless laborers/ artisans:	No additional land is proposed to be acquired for main plant & township. Hence no PAPs involved.
	a) SC, ST/ Adivasi	
	b) Others (Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures, if a survey is carried out give details & year of survey)	
9.	Financial details:Project cost as originally planned and subsequent revised estimates and the year of price reference:	Project Cost as on 31/03/2018 is Rs.2986.14 Crores.

	a) Allocation made for environmental management plans with item wise and year wise break-up	Rs.620.18 crores.
	b) Benefit cost ratio/ internal rate of Return and the year of assessment	--
	c) Whether © includes the cost of environmental management as shown in the above	Yes
	d) Actual expenditure incurred on the project so far	Rs.2169.71 Crores
	e) Actual expenditure incurred on the environmental management plans so far	Rs.426.0574 Crores
10.	Forest land requirement:	No additional land is proposed to be acquired for main plant, & township or as disposal area of stage -V. The main plant and township area for expansion unit under stage-V (1x500 MW) shall be accommodated within the land acquired under VSTPP, Stage-I,II,III & IV. Hence no forest land involved.
	a) The status of approval for diversion of forest land for non forestry use	
	b) The status of clearing felling	
	c) The status of compensatory afforestation, if any	
	d) Comments on the viability & sustability of compensatory afforestation programme in the light of actual field experience so far.	
11.	The status of tree felling in non-forest area (such as submergence area or reservoir, approach roads), if any with quantitative information required.	
12.	Status of Construction (actual and/or planned)	
	a) Date of commencement (actual and/or planned)	Date of Main Plant Award 03.05.2012
	b) Date of completion (Actual and/or planned)	August' 2015
13.	Reason for the delay in the project is yet to start.	-

Compliance Status cum Action plan report for Environmental Clearance for Vindhyachal Stage-V (1x500 MW) accorded by MoEF vide letter No. J-13012/06/2009/IS. II (T) dated 02.05.2012

S.No.	EC STIPULATED CONDITIONS	STATUS/ACTION PLAN
	<i>Specific conditions</i>	
I	Scheme for implementation for harnessing solar power within the premises of the plant particularly at available roof tops shall be formulated and status of implementation shall be submitted to the Regional office of the ministry from time to time.	Process of harnessing solar power is being aggressively pursued. Total 569 kw of Solar Rooftop power commissioned. Another 1170 kw expected to be commissioned by Mar'19. Labour gate to stage -1 building total street light replaced by solar light. NTPC Shopping complex in township total lights replaced by solar lights.
II	FGD shall be installed for the proposed expansion unit.	FGD installed and is operational.
III	The project proponent shall undertake measure and ensures that no fugitive fly ash emissions take place at any point of time	Provision is as per the condition stated. In ash pond the minimum water cover has been maintained to control the fugitive emission from the ash pond areas.
IV	Stack of 275m height shall be installed and provided with continuous online monitoring equipments for Sox, NOx, and PM2.5 & PM10. Exit velocity shall not be less than 22 m/sec. Mercury emissions from stack may also monitored on periodic basis.	A flue stack of 275m height has been installed and continuous online monitoring system has already been installed for online monitoring for the parameters for SPM, Mercury emission, SOx and NOx monitoring .
V	High efficiency Electro Static Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/NM3.	ESP design particulate emission is < 50mg/Nm3 and the limit is being adhered to.
VI	Monitoring of surface water quality and quantity 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.	Surface water is being tested on regular basis in our lab (approved by MPPCB-Bhopal) and Reports are sent to MPPCB –Bhopal and quarterly reports are being sent to zonal office of CPCB at Bhopal monthly basis, Waste water quantity & quality is also being monitored and records are maintained. Analysis of Heavy metal in surface water is also done.
VII	Regular monitoring of ground water level shall be carried out by	The Plant is not using any ground water for its

	<p>establishing a network of existing wells and constructions new Piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metal (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. No water shall be extracted for use in operation of the power plant in lean seasons.</p>	<p>operation hence no adverse effect on the ground water is possible. Analysis of Heavy metal in ground water in ash dyke area is being carried out.</p>
VIII	<p>A well designated rainwater harvesting shall be put in the place before commissioning of the plant. Central ground water Authority/Board shall be consulted for finalization of appropriate rainwater harvesting technology /design within a period of three months from the date of this clearance and details shall be furnished. The design of rain water harvesting shall comprise of rain water collection from the built-up area and open areas in the plant premises. Action plan road map for implementation shall be submitted to the ministry with in six months.</p>	<p>Rain water harvesting study has been done in consultation with Central Ground Water Board, Bhopal. As per the report, since the water table in the area is very high, normal rain water harvesting is not possible. However, NTPC Vindhyachal is planning to install rain water harvesting structures in most of the public buildings in the township and plant for which contract is under award. Likely to be executed by June'19.</p>
IX	<p>Waste water generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB.</p>	<p>Waste water Generated in the existing plant is being treated through ETP up to the prescribed limits. The treated water is being reused in the service water. The water quality parameters are being monitored and maintained in the prescribed limits of MPPCB. Monthly analysis reports are being sent to MPPCB-Bhopal.</p>
X	<p>COC of 4.0 shall be adopted.</p>	<p>Complied.</p>
XI	<p>Coal transportation to plant site shall be undertaken by rail and no road transportation shall be permitted.</p>	<p>Coal transportation is being done only through Rail only. NTPC Vindhyachal has got its own MGR system so all transportation is being done through MGR only.</p>
XII	<p>Sulphur and ash contents in the coal to be used in the project shall not exceed 0.5% and 34 % respectively at any given time. In case of variation of coal quality at any time fresh reference shall be made to the ministry for suitable amendments to environmental clearance conditions wherever necessary.</p>	<p>Average Ash content in coal is 33.67% and Sulphur is less than 0.38 % as per condition stated.</p>
XIII	<p>A detailed study on chemical composition of coal used particularly heavy metal and radio activity contents shall be carried out through a reputed</p>	<p>Radio activity levels checked and found acceptable.</p>

	institute and report shall be submitted to the Region Office of the Ministry. Only after ascertaining its radioactive level fly ash shall be utilized for brick manufacturing.	
XIV	Fly ash shall not be used for agriculture purposes. No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachates shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the 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 shall be done in close co-ordination with the SPCB.	We are not disposing ash for any agriculture activity & mine void filling.
XV	Utilization of 100% fly ash generated shall be made 4 th year of the operation. Status of implementation shall be reported to the Regional office of the Ministry from time to time.	Current ash utilisation for the station stands at ~ 30 %. Efforts are afoot to improve it continuously. Vindhyachal being located amidst a cluster of power plants and in a remote location, low demand for fly ash and high transportation cost is adversely affecting our efforts.
XVI	Fly ash shall be collected in the dry form and storage facility (Silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry. Mercury & Other heavy metals (As, Hg, Cr. Pb. Etc.,) will be monitored in the bottom ash also in the effluent emanating from the existing ash pond. No ash shall be disposed off in low lying areas.	Dry ash system and SILO in place. Unutilized fly ash is being disposed off in the ash pond in the form of slurry. Mercury & Other heavy metals (As, Hg, Cr. Pb. Etc.) being monitored in the bottom ash and also in the effluent emanating from the existing ash pond. No ash being disposed off in low-lying areas.
XVII	Ash pond water shall be re-circulated and utilized. Ash pond shall be lined with HDPE/LDPE lining or any other suitable impermeable media such that no leachates take place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	100% ash water recirculation being done. A lining of bentonite mixed with clay is used to prevent leachate.
XVIII	Greenbelt consisting of 3 tier of plantation of native species around the plant of at least 50 m width shall be raised (except in area not feasible). The density of trees shall not be less than 2500 per ha and rate of survival at least 80%, additional greenbelt of appropriate density and width not less than 50m at least, shall be also developed between the ash pond and the village facing the ash pond.	Every year, NTPC Vindhyachal is planting more than 25000 nos of tree in and around the plant area. Additionally, 50000 trees are also planted every year through MPRVVN for which an MOU has been signed with them for next ten years (from 2016-17). In current financial year 2018-19, 85000

		saplings have been planted by NTPC-Vindhyachal. NTPC-Vindhyachal has developed the green belt around the plant as well as in the ash dyke area. Till date we have planted more than 23 lakh trees.
XIX	A special scheme for enlistment of SC & ST population in the study area shall be formulated and implemented in a time bound manner. The project proponent shall also identify the rights of Tribal's under existing laws and ensure its protection and implementation thereof.	Is Being followed.
XX	The Project proponent shall also adequately contribute in the development of neighboring village. Special package with implementation schedule for providing potable drinking water supply in the nearby villages and schools shall be undertaken in time bound manner.	We are doing regularly developmental activities in the neighboring areas. A fund of Rs. 9 crore provided to Municipal Corporation for development of integrated water supply system in the neighborhood areas. Additional supply of drinking water also provided from the Plant area. 4 RO plants set up in the neighborhood.
XXI	CSR scheme should address Public hearing issues and shall be undertaken based on need based assessment in and around the village within 5.0 km of the site and in constant consultation with the village panchayat and the District Administration. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken.	Public hearing issues are being addressed; under implementation in consultation with gram panchayat & Distt.Administration. Employment being provided to the Project Affected People by outsourcing of some jobs through various manpower contracts.
XXII	It shall be ensured that an in-built monitoring mechanism for the CSR scheme identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The Project proponents shall also submit the status of implementation of the scheme from time to time. The achievements should be put on company's website.	As per Govt.of India schedule, it is being audited by CAG.
XXIII	An amount of Rs 11.20 Crores shall be earmarked as one-time capital cost for CSR programme as committed by the project proponent. Subsequently a recurring expenditure of Rs 2.20 Crores per annual shall be earmarked as recurring expenditure for CSR activities.	Being complied
XXIV	An Environmental cell shall be created at the project site itself and shall be headed by qualified officer, who is well versed with the environmental aspects. It shall be ensured that the Head of the Cell Shall directly report to the head of the Organization.	An Environmental cell has been created at the project site with HOD at the level of AGM and then to GM (Chem & EMG) to GM (O&M) and then HOP .

S.No.	Conditions	Status /Action plan
<i>General conditions</i>		
I	The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. Arrangement shall be made that effluents and storm water do not get mixed.	Treated water from ETP conforms to the prescribed limits. The treated water is being reused in the plant processes only. The water quality parameters are being monitored and maintained in the prescribed limits of MPPCB. Drain separation work is under award.
II	A Sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation.	6 MLD capacity STP is under operation while sewage generation is around 1.8 MLD. Treated water from sewage plant is being used for horticulture.
III	Adequate safety measure shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer seasons. 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.	The plant has been provided with adequate automated fire protection system. Fully equipped CISF manned central fire control station is in place. NTPC Vindhyachal has the onsite & off site emergency plan for mitigation of control of fire and explosion hazards arising due to transportation, use of storage of coal and oil.
IV	Storage facility for auxiliary liquid fuel such as LDO/HFO/LSHS shall be made in the plant area consultation with the department of Explosives, Nagpur; Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management plan shall be prepared to meet any eventually in case of an accident taking place due to storage of oil.	Storage facility created as per EC conditions. Liquid fuels with sulphur content < 0.5 % not available.
V	First Aid and sanitation arrangements shall be made for the drivers and others contract workers during construction phase.	A First Aid and sanitation arrangement has been made for contract workers at construction site.
VI	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 85 dB (A) from source. For people working in high noise area, requisite personal protective equipments like earplugs/ear muffs etc. shall be provided. Workers engaged in noise areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for	Acoustic enclosures have been provided to control the noise level below regulatory norms & personal protective equipment have been provided wherever required.. Regular monitoring all the environmental parameters is being carried out & Noise level is also being complied as per norms. Regular health check-up is

	treatment for hearing loss including shifting to non noisy /less noisy areas.	being done in NTPC Hospital.
VII	Regular monitoring of ambient air ground level concentrations of SO ₂ , NO _x , PM _{2.5} & PM ₁₀ and Hg shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional office of this Ministry. The data shall also be put on the website of the company.	NTPC-Vindhyachal has installed automatic Ambient Air quality monitoring station in all four directions and at various locations prescribed by MPPCB-Bhopal for monitoring of SO ₂ , NO _x , and PM _{2.5} & PM ₁₀ . Hg monitoring shall also be done periodically. All the parameters are being monitored on regular basis and actions are being taken for any deviation in parameters beyond limits. Reports are being submitted to CPCB on quarterly basis and to MPPCB on monthly basis.
VIII	Provision shall be made for the housing of construction labour (as applicable) within the site with all necessary infrastructure and facilities such as fuel, for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc., the housing may be in the form of temporary structures to be removed after the completion of the project.	Provision made as per the EC condition. Construction phase is now over and all construction labor has now been moved from the site.
IX	The Project proponent shall advertise in at least two local news paper widely circulated in the region around the project, one of which shall be in the vernacular within seven days from the date of this clearance letter, informing that the project has been accorded environmental 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 & Forest at http://envfor.nic.in .	Advertisement as per the conditions has already been done.
X	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila parishad/Municipal corporation, Urban local Body and the local NGO, if any from whom suggestions/representations, if any, received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	Copy of EC letter has been sent as per EC condition.
XI	The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall simultaneously be sent to the Regional Office of MoEF, The respective zonal officer of CPCB and the SPCB.	Provision of ambient air quality monitoring through online has been made available to CPCB directly (PM _{2.5} , PM ₁₀ SO ₂ , NO _x .) For on line stack monitoring CEMS has been installed in

	The criteria pollutant level namely: SPM, RSPM, (PM2.5, PM10) SO2, NOx (Ambient levels as well as stack emission) shall be displayed at a convenient locations near the main gate of the company in the public domain.	stack for monitoring of Sox, NOx, and SPM. The Compliance report shall be uploaded on the website on six monthly basis.
XII	The Environmental statement for each financial year ending 31 st March in form-V as ins mandated to be submitted by the project proponent to the concerned State pollution Control Board as prescribed under the Environmental (Protection) Rule 1986, as amended subsequently shall also be put on the website of the company along with the status of compliance of environmental conditions and shall be sent to the respective regional office of the ministry by E-Mail	Environment statement (form-V) is submitted to MPPCB-Bhopal every year within the stipulated time.
XIII	The project proponent shall submit six monthly reports on the status of the implementation safeguards to the MoEF, its Regional office, CPCB and SPCB. The project proponent shall upload the status of compliance of the environmental clearance conditions on their website and update the same periodically send the same by e-,ail to the Regional Office of MoEF.	Noted for compliance.
XIV	Regional Office of the MoEF will monitor the implementation of the stipulated conditions. A complete set of documents including EIA report and Environmental management plan alongwith the additional information submitted from time to time shall be forwarded to the Regional office for their use during monitoring. Project proponent will upload the compliance status in their website and up date the same from time to time at least six monthly basis. Criteria pollutants level including NOx (from stack & ambient air) shall be displayed at the main gate of the power plant	A complete set of documents including EIA report and Environmental management plan has been submitted to the Regional office of the MoEF, Zonal office of CPCB and MPPCB-Bhopal. Six Monthly compliance reports shall be submitted to the Regional office of the Ministry, CPCB & MPPCB and shall be upload on the website of the company.
XV	Separate funds shall be allocated for implementation of environmental protection measures alongwith the item wise breakup. These cost shall be included as part of the project cost. The funds earmarked for the environmental protection measure shall not be diverted for other purposes and year wise expenditure should be reported to the Ministry.	Noted for compliance.
XVI	The project authorities shall inform the regional office as well as the Ministry regarding the date of financial closures and final approval of the project by the concerned authorities and date of start of land development work and commissioning of plant.	NTPC-Vindhyachal has intimated to MOEF through EC compliance report or to the RO-MPPCB, regarding the date of date of start of land development work and commissioning of plant.
XVII	Full Cooperation shall be extended to the Scientists/Officers from the	Being done.

	Ministry/regional office of the ministry/CPCB/SPCB that could be monitoring the compliance of environmental status.	
XVIII	The ministry of environment & forests reserve the right to revoke the clearance of conditions stipulated is not implemented to the satisfaction of the Ministry. The Ministry may also impose additional environmental conditions of modify the existing ones, if necessary.	NTPC honors the conditions of MoEF
XIX	The Environmental clearance accorded shall be valid for 5 years to start operation by the power plant.	Plant has commissioned within 4 years.
XX	Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment Protection Act 1986.	All efforts will be made to proceed with factual data & transparency & no false /fabricated data's will be submitted by NTPC.
XXI	In case of any deviation or alteration in the project proposed including coal transportation system from those submitted to this ministry for clearance, afresh reference should be made to the Ministry to assess the adequacy of the conditions imposed and to add additional environmental protection measures required, if any.	Noted.
XXII	The above stipulations would be enforced among others under the water (Prevention & Control of pollution) act 1974, the Air (Prevention & Control of pollution) act 1981, The Environment Protection Act 1986 and rules there under , Hazardous Waste (management handling & trans boundary Movement) rules 2008 and its amendments, the Public liability Insurance act 1991 and its amendments.	NTPC accepts the terms & conditions of MoEF.
XXIII	Any appeal against this environmental clearance shall lie with the National Green Tribunal Act 2010.	Noted.

Annexure -1

**COST PROVISION FOR ENVIRONMENTAL MEASURES
PROJECT: VSTPS STAGE –V (1X500 MW)**

SL.NO.	Item Description	Cost (Rs. In Millions)	Expenditure as on Date (Rs. In Millions)
1.	Electrostatic Precipitator.	833.33	833.33
2.	Chimney.	418.82	418.82
3.	Cooling Towers incl.Civil Works.	534.00	606.144
4.	Ash Handling.	764.79	505.08
5.	Ash Dyke-First 9 years.	755.42	00
6.	Ash water Recirculation Incl.ETP.	341.36	226.3
7.	Dust extraction & suppression system.	15.00	00
8.	DM Plant waste treatment systems.	15.00	00
9.	Sewerage collection, treatment & disposal.	5.00	00
10.	Environmental Lab, equipment.	5.00	00
11.	Green belt, Afforestation & Landscaping.	10.00	00
12.	Flue Gas Desulphurisation.	2504.08	1670.9
	Total	6201.80	4260.574