

M/s KSK Mahanadi Power Company Limited. ***(6x600MW Coal Based Thermal Power Plant)*** ***(3X600MW-Operational)***

At Village-Nariyara, Akaltara, District- Janjair, Champa, Chhattisgarh.



Six Monthly EC Compliance Report-

For period:
OCT'20
to
Mar'21



***Six Monthly Compliance Status for Specific Conditions of Environmental
Clearance Accorded, Amendment and Extended of Validity vide
Ref. Letter No- J13012/44/08 -IA.II(T) Dated 19.10.2009 upto
Ref. Letter No- J-13012/44/2008-IA.II (T), Dated 19.04.2018***

S. No.	Condition	Compliance Status
1	Two tri-flue stacks of 275m height should be provided.	Two nos. of RCC stacks already been provided for all the six units. The height of both the stacks is 275 meters from the ground level.
2	COC of 5 shall be maintained	Cycle of Concentration 5 has been maintained.
3	To utilize fly ash generated from the power plant, the proponent should explore the possibility of setting up either its own cement plant /grinding unit and/or a brick manufacturing unit of 50,000/1,00,000 bricks/day capacity, and explore other possibilities of utilizing the fly ash in full form the stipulated period.	Achieved 100% fly ash utilization As per Fly Ash Notification S.O. 2804(E), 3rd November, 2009, and details of data and long term action is enclosed as Annexure-I .
4	For post project monitoring, the proponent should set up piezometric monitoring station around the ash pond.	4 Nos. of Piezometric wells have been provided around the ash pond area. Images of Piezometers is enclosed as Annexure-II
5	From 4 th year onwards, the transportation of coal should be through rail only.	<u>Complying.</u> i) A state of art Railway Infrastructural facilities have been developed to transport coal through rail mode in KMPCL. ii) As per EC amended by MoEF &CC on 19.04.2018; Coal is being transported on the basis of following manner: a) 70% domestic Coal is being transported by Rail mode and 30% by Road. b) 100% imported Coal is being transported through Railway mode. Details of infrastructure facilities are presented in Annexure-III .
6	The green belt to be provided should be of canopy type with three tiers.	A green belt of 5/6 tiers, in 100 meter width is being developed, along the periphery of the plant boundary. Species selection has been made on the basis of local Climatological factors and soil characteristics. (i.e. Sisam, Peltoform, Satvan, Karanj, Siris, Simarua, Neem, Ganga imili, Pepal, Kadam, Cassia Siamia, Chinour, Arjuna, Mango, Bargad, Jamun, Amla,

		<p>Gulmohar are being used in rows to maintain canopy type and strata)</p> <p>As on date, total 7,20,000nos. of saplings have been planted within the Plant premises in an areas about 277 hectares i.e 33.3% of total project area (828.46 Hectares). Out of which 5,17,310 nos. of saplings has been survived and further plantation by causality replacement is under progress. Photos of the Greenbelt developed at site are attached as Annexure-IV.</p>
7	An amount of 64 crore as capital and Rs. 10 crore/annum as recurring should be earmarked for the activities to be taken up under CSR by the above proponent. Details of activities to be undertaken in this regard should be submitted.	As on date Rs. 54.87 Crores have been spent for CSR activities, the detail of the work activities under CSR is enclosed as Annexure-V. Similarly, the report has been communicated to MOEF and Regional Office, Bhopal including CECB, Raipur on regular basis.
8	High efficiency of Electrostatic Precipitator (ESP) with spare fields shall be installed to ensure that particulate emission does not exceed 50 mg/Nm ³ .	<p>High efficiency ESP + Hybrid Fabric Filter combination, with 99.7% efficiency has installed for each Unit (600MW). Average emission of Particulate Matter from operational Units# 3, 4 & 2 are well within stipulated norms of 50mg/Nm³ and 30 mg/Nm³.</p> <p>Note:</p> <p>Emissions from Unit#3 and Unit#4 have been designed to operate less than 50 mg/Nm³ and in case of Unit#2, it is less than 30mg/Nm³. Average emission of Particulate Matter from operational Units# 3, 4 & 2 are well within 20 to 50 mg/Nm³.</p> <p>Details of stack emission are presented in Annexure-VI.</p>
9	Space provision shall be kept for retrofitting of FGD system, if required at a later date.	Space provisions have been made for installation of FGD system in Project lay out.
10	Adequate dust extraction 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.	<p>Following provisions have been made to control the Fugitive emissions:</p> <ul style="list-style-type: none"> ➤ Pulse Jet type bag filters have been installed at all the Transfer points and on coal conveyor system meant for Coal transport from CHP area to boiler area. ➤ 44 Nos. of Rain guns with Water spraying system has been installed in the Coal yard area. ➤ 172 Nos. Dust Suppression System & 28 Nos. Dry Fog System has been working in different

		<p>raw material transfer points and handling section to control fugitive emission at CHP area.</p> <p>Fly ash silo top is mounted with 2 Nos. of Bag filters to arrest fugitive dust, similarly</p> <p>Water spraying system has been provided to mitigate fugitive dust from the dust prone area. Details of Dust extraction and dust suppression systems are attached in Annexure-VII</p>
11	A Sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/plantation.	<p>STP having capacity of 2x25m³/Hr., is under operation, for treating Domestic waste water.</p> <p>The treated waste water is being reused for green belt and horticulture purpose. Photographs are attached in Annexure-VIII.</p>
12	Rainwater harvesting should be adopted. Central Ground Water Authority/board is consulted for finalization of appropriate rain water harvesting technology within a period of three months from the date of clearance and details shall be furnished.	<ul style="list-style-type: none"> ➤ Rain water harvesting structures have been constructed as per approved plan of CGWB. ➤ Rain water harvesting pond has been constructed within premises, abandoned bore wells have been converted into rain water recharge wells and Percolation structures have been constructed in low lying areas. <p>Details are enclosed as Annexure-IX.</p>
13	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season.	<p>Adequate provision for dust suppression system-water sprinkling arrangement has been incorporated in the project in all dust vulnerable areas including coal storage yard and being operated regularly to minimize fugitive emissions. All safety measures have been adopted to check/minimize any incidents of fire and especially in summer season. Two full-fledged fire tenders are available at site. Photos are attached in Annexure-X.</p>
14	Storage facilities for auxiliary liquid fuel such as LDO/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. Sulphur content in the liquid fuel not exceed 0.5%	<p>Based on the QRA, safe location has been identified for auxiliary fuels and the same has been located in the North-West corner at a distance of 600 mts from the nearest plant facility.</p> <p>On Site Disaster Management Plan has been approved by factory Inspector and the same is being implemented during operation of the power plant.</p>

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, crèche etc. The housing may be in the form of temporary structure to be removed after the completion of the project.	Complied.
16	Regular monitoring of ground water in and around ash pond area including heavy metals (Hg,Cr,As,Pb) shall be carried out, records maintained and six monthly reports shall be furnished to the Regional Office of this Ministry. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.	Regular Monitoring of ground water in and around ash dyke areas is being carried out to check the heavy metals in the ground water. The concentration of Hg, Cr, As, Pb in ground water is compared with the baseline concentrations in Annexure – XI
17	A greenbelt of adequate width and density shall be developed around the plant periphery covering 1/3 rd of the project area with local species.	A green belt of 5/6 tiers, in 100 meter width is being developed, along the periphery of the plant boundary. Species selection has been made on the basis of local Climatological factors and soil characteristics. (i.e. Sisam, Peltophorum, Chatian, Karanj, Siris, Simarua, Neem, Arjun, Ganga emali, Pipal, Kadam, Cassia siamia, Chinour, Kahua, Mango, Bargad, Jamun, Amla, Gulmohar are being used in rows to maintain canopy type strata) As on date, total 7,20,000nos. of saplings have been planted within the Plant premises in an areas about 277 hectares i.e 33.3% of total project area (828.46 Hectares). Out of which 5,17,310 nos. of saplings has been survived and further plantation by causality replacement is under progress. Photos of the Greenbelt developed at site are attached as Annexure-III.
18	First Aid and sanitation arrangements shall be made available for the drivers and other contract workers during construction phase.	Adequate arrangement for first aid, sanitation and safe drinking water has been provided for all drivers and contractor workers during construction activities.
19	Regular monitoring of ground level concentration of SO ₂ , NO _x , Hg, SPM and RSPM shall be carried out in the impact zone and records maintained. If at any stage	Regular ambient air quality monitoring of ground level concentration of SO ₂ , NO _x , CO, PM ₁₀ and PM _{2.5} is being carried out in the impact zone and the details are being submitted on monthly basis to CECB,

	<p>these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately.</p> <p>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.</p>	Chhattisgarh. The values are well within the prescribed limits
20	<p>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 /office of Municipal Corporation/Gram Panchayat concerned and on the company's web site 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 and Forests at http://envfor.nic.in.</p>	<p>The Public Notice of Environmental Clearance has been published in two local newspapers namely- The Haribhumi and DanikBhaskar on 23.10.09 which are widely circulated in the region.</p> <p>Enclosed as Annexure -XII</p> <p>Complied</p>
21	<p>A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad / 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.</p>	<p>Complied</p> <p>Environmental Clearance letter has been placed in the website of the company.</p>
22	<p>The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitoring data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO₂, NO_x (ambient levels as well as stack emissions) shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.</p>	<p>Status of compliance of EC conditions has been uploaded as stipulated and is being updated regularly on Six monthly basis.</p>

23	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well by e-mail) to the respective Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB.	Half yearly report for the period of Apr.2020 to Sept.2020 has been submitted vide KMPCL Letter No. MoEF & CC, NPUR/BPSN/2500108/911 Dtd. 28.09.2020. Enclosed as Annexure-XIII
24	The environment statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MOEF by e-mail.	Environment Statement for the Financial year 2019-20 has been submitted vide KMPCL letter no.- CECB,BILAS/PDKN/2500108/655 Dtd.10.09.2020. Enclosed as Annexure-XIV
25	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	An Environment Management cell has been setup, headed by Sr. General Manager.
26	Regional Office of the Ministry of Environment & Forests located at Bhopal will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report, Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring.	A complete set of documents has been submitted to Regional Office of the Ministry vide Letter Ref No. MOE&F, BHPL/AGRY/1160201/1147 Dated 09.12.2009.
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 the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	As submitted in the EIA report separate amount of Rs. 1246 Cr. has been provided for pollution control, treatment and monitoring systems.

28	The project authorities shall 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 and commissioning of plant.	<ul style="list-style-type: none"> • Date of financial closure: Feb, 2010. • Date of start of land development work Nov, 2009. • Unit No.# 3 (1x600MW) is under operation since Sep 2013 • Unit No.# 4 (1x600MW) is under operation since Sep 2014 • Unit No.# 2 (1x600MW) is under operation since Feb 2018 • Work is in stopped due to financial constraints and work shall be commenced after obtaining EC for balance units.
29	Full cooperation shall be extended to the Scientists/Officers from the Ministry/Regional Office of the Ministry at Bangalore/the CPCB/the SPCB who would be monitoring the compliance of Environmental status.	<p>Noted & agreed.</p> <p>Being complied as per the requirements of CPCB and CECB Raipur, Chhattisgarh.</p>
Additional conditions as per EC Amended & Extended of Validity on 23.09.2015		
30	The total project area shall comprise of 828.46 Ha as stipulated while issuing the EC	Complied
31	An amount of Rs 64 crores as capital and Rs 1.83 Crores /annum (or the amount as per the CSR policy of GOI whichever is higher) as recurring costs should be earmarked for CSR activities to be undertaken in this regard shall be submitted.	As on date Rs. 54.87 Crores has been spent for CSR activities, the detail of the work activities under CSR is enclosed as Annexure-IV . Similarly, the report has been communicated to MOEF and Regional Office, Bhopal including CECB, Raipur on regular basis.
32	Continuous online monitoring system for stack emissions, ambient air quality and effluent discharge for various relevant parameters shall be put in place at the earliest, if already done and compliance to be reported to this ministry including its RO	<p>Continuous online monitoring system for stack emissions is already installed & working w.r.t operational Units No. # 3, 4 & 2.</p> <p>Online monitoring data is already showing at main gate display board and website-portal of KMPCL.</p> <p>4 CAAQMS have been installed inside the plant premises.</p> <p>Continuous Effluent Monitoring systems have been installed in Guard Pond.</p> <p>The Real time data for CEMS, CEQMS & CAAQMS have also been transmitted to CPCB server through G-lens software.</p> <p>Photos for the same are attached as Annexure-XV</p>

33	Harnessing solar power within the premises shall be carried out and the status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring report.	Options for Harnessing of Solar power as available at roof tops within the premises is being explored out and details will be submitted shortly
34	A long term study of radio activity and heavy metals contents on coal to be used shall be carried out through reputed institute and results thereof analyzed every two year and reported along with monitoring reports. Therefore 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.	<p>Long term study of radio will be carried out through reputed institute. However, the following measures have been taken to minimize the leaching if any in coal yard and ash storage systems</p> <ol style="list-style-type: none"> 1. 300mm CC Flooring has been done in Coal yard area. 2. Construction of garland drain, all along the Coal yard, from where waste water is collected and after treatment in ETP, the water is being reused for dust suppression <p>Following measures has been implemented for Ash Dyke area, to check the leaching of Heavy metals into the ground water table :</p> <ol style="list-style-type: none"> 1. Both Bottom & Fly ash Dykes has been floored with 0.75Micron LDPE. 2. Four No's of piezometric Wells have been constructed, along the periphery of ash Dykes, for regular monitoring of Quantity & Quality of ground water to assess the contamination or leaching of heavy metals from ash dyke area
35	Mercury emissions from stack shall be monitored on periodic basis.	Stack Emissions monitoring is being done monthly intervals for SO ₂ , NO _x , CO, PM (Particulate matter), Hg (Mercury) and other heavy metals. Reports for the same are being submitting to SPCB on monthly basis.
36	Fugitive emissions shall be controlled to prevent impact on agricultural or non-agricultural land.	<p>Following provisions have been made to control the Fugitive emissions:</p> <ul style="list-style-type: none"> ➤ Pulse Jet type bag filters have been installed at all the Transfer points meant for Coal transport from CHP area to boiler area. ➤ 44 Nos. of Rain guns with Water spraying system has been installed in the Coal yard area. ➤ 172 Nos. Dust Suppression System & 28 Nos. Dry Fog System has been working at different raw material transfer points and handling section to control fugitive emission in CHP area.

		<p>Fly ash silo top is mounted with 2 Nos. of Bag filters to arrest fugitive dust, similarly</p> <p>Water spraying system has been provided to mitigate fugitive dust from the dust prone area.</p> <p>Apart from that a thick green belt is already developed around plant boundary to arrest fugitive emission from non-point sources. Photos are attached as Annexure-XVI</p>
37	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.	Adequate measures had been implemented to take care of natural drainage system.
38	Fly ash shall not be used for agricultural purpose. No Mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such as that no leachate 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.	Complied
39	Details of 100% Fly ash utilization plan as per latest Fly ash Notification of GOI along with firm agreements/ MOU with contracting parties including other usages etc. shall be submitted. The plan shall also include disposal method/ mechanism of bottom ash.	Achieved 100% fly ash utilization As per Fly Ash Notification S.O. 2804(E), 3rd November, 2009, and details of data and long term action is enclosed as Annexure-I.
40	Green belt shall also be developed around the ash pond and above the green belt around the plant boundary.	<p>For green belt, more than 30000 saplings have been planted all around the ash dyke area, covering area of approx. 25 Ha.</p> <p>A green belt of 5/6 tiers, in 100 mtr width is being developed, along with the periphery of the plant boundary.</p> <p>Species selection has been made on the basis of local Climatological factors and soil characteristics.</p> <p>(i.e. Sisam, Peltandra, Satvan, Karanj, Siris, Simarua, Neem, Ganga emili, Pepal, Kadam, KesiaSamia, Chinour, Arjuna, Mango, Bargad,</p>

		<p>Jamun, Amla, Gulmohar are being used in rows to maintain canopy type and strata)</p> <p>As on date, total 7,20,000nos. of saplings have been planted within the Plant premises in an areas about 277 hectares i.e 33.3% of total project area (828.46 Hectares). Out of which 5,17,310 nos. of saplings has been survived and further plantation by causality replacement is under progress. Photos of the Greenbelt developed at site are attached as Annexure-III.</p>
41	<p>An environment Cell comprising of at least one expert in environment science/Engg. Ecology, occupational health and social science, shall be created preferably at project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the head of the cell shall directly report to the Head of the plant who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures.</p>	<p>Environment Cell is already established which includes Environment Engineer, Environmental scientist, Ecologist, Horticulturist and social science experts from inception of project operations. Environmental cell head is directly reporting to plant. EMD cell basic responsibility is to implement environmental compliance conditions of MOEFCC and CFE and CFO and also implement environmental measures.</p>
42	<p>CSR schemes identified based on public hearing issues and need based assessment shall be implemented in consultation with the village panchayat and the district administration starting for the development of project itself. AS part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for community development activities and income generating programs.</p>	<p>CSR schemes already identified based on public hearing issues and need based assessment & implemented in consultation with the 4 village panchayat and the district administration. Also Company already provided separate budget for community development activities.</p>
43	<p>For proper and periodic monitoring of CSR activities, a CSR Committee or a social audit committee or suitable credible external agency shall be appointed.</p> <p>CSR activities shall also be evaluated by an independent external agency. This evaluation shall be both concurrent and final</p>	<p>Regular monitoring of CSR activities is being done by Plant authorities and also appraised to District administration.</p>
44	<p>The project proponent shall formulate a well laid corporate environment policy and</p>	<p>Corporate Environmental policy has been prepared as per laws and regulations. At present the</p>

	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.	environmental affairs has been evaluated by the environmental cell headed by Environmental Officer.
45	All other conditions in this Ministry's letter of even no. dated 19.10.2009 and amendment dated 24.01.2012 shall remain the same.	Agreed & complied.
<i>Additional conditions as per EC Amended on 26.05.2016</i>		
46	The Sulphur and ash content coal shall not exceed 0.6% and 36% as per EC. For imported coal, the same shall not exceed 0.8% and 25% respectively or as per the MoU/FSA, whichever is lower.	Complied for both Sulphur and Ash contents. Average Sulphur and Ash content of coal has been used in KMPCL are 0.4% and 36% respectively. Details are attached in Annexure-XVII
47	Imported coal transport shall be by rail only	Complied. 100% imported coal has been transported through rail mode.
48	Necessary action shall be taken for compliance of the Operating & Proposed Units to the standards for TPPs notified on 07.12.2015.	Complied for Particulate Matter emission and specific water consumption for all operational Units has been achieved within in the prescribed standard. To achieve SO ₂ and NO _x limits, the FGD installation is as designed and planned. As per the notification of MoEF & CC, dated 31 March 2021, the completion project is to be completed by 31 December 2024. In this connection, Technical Bids evaluation is under progress and details are presented in Annexure-XVIII
<i>Additional conditions as per EC Amended and Extended of validity on 19.04.2018</i>		
50	i) As forward e-auction is a participation and shall not guarantee the PP to confirm coal sourcing, therefore, on confirmation of sourcing of e-auction of coal blocks/ basket of coal mines, the PP shall inform the details of coal procurement and shall limit the coal transportation by road for 3.54 MTPA (50% of linkages) domestic coal procured. ii) The remaining quantity of 8.02 MTPA domestic coal and 2.6 MTPA imported coal shall be transported by rail only. A	Noted & Complied.

	fresh reference shall be made to the Ministry for any change in mode of transport.	
51	<i>Additional conditions as per Office Memorandum on Amendment in Environmental clearance for change in coal source by Thermal Power Plants, Dtd.11.11.2020</i>	
	a) Details regarding change in source (location of the source, proposed quantity, distance from power plant and mode of transportation), quality (Ash, Sulphur, Moisture content and Calorific value) shall be informed to the Ministry and its concerned Regional Office. The quantity of coal transported from each source along with the mode of transportation shall be submitted as part of EC Compliance Report.	<p>Noted & complying.</p> <p>The details of coal source, mode of transport, distance from power plant and quality of coal i.e. Ash, Sulphur, Moisture content and Calorific value of the previous FY 2020-21 are presented as Annexure-XVIV.</p>
	b) The applicable flue gas emissions standards for Particulate Matter, Sulphur Dioxide, Oxides of Nitrogen and Mercury shall be complied in line with Ministry's Notification vide S.O. 3305(E) dated 7.12.2015 and subsequent emissions. A Progress of implementation and its compliance shall be submitted as part of Compliance report.	<p>Noted & complying.</p> <p>The PM & Hg value of flue gas for all running units has been maintained within standard in line with MoEF & CC notification vide S.O. 3305 Dtd. 07.12.2015.</p> <p>To achieve SO₂ and NO_x limits, the FGD installation is as designed and planned. As per the notification of MoEF & CC, dated 31 March 2021, the completion project is to be completed by 31 December 2024 and details are presented Annexure-XVIII.</p>
	c) Ash content in the Coal and Coal transportation is governed by the Ministry's Notification vide S.O. 1561(E) dated 21.5.2020 As far as possible, Coal transportation shall be done by rail/conveyor or other eco- friendly modes. However, road transportation is allowed with tarpaulin covered trucks till the railway/ conveyor belt infrastructure is made available. A progress (Physical and financial) of rail connectivity from nearest railway siding or conveyor connectivity to the power plant shall be submitted in the EC compliance report.	<p>Noted & complying.</p> <p>i) A state of art Railway Infrastructural facilities have been developed to transport coal through rail mode in KMPCL.</p> <p>ii) As per EC amended by MoEF &CC on 19.04.2018; Coal is being transported on the basis of following manner:</p> <p>c) 70% domestic Coal is being transported by Rail mode and 30% by Road.</p> <p>d) 100% imported Coal is being transported through Railway mode.</p> <p>Details of infrastructure facilities are presented in Annexure-III.</p>
	d) Additional ash pond is not allowed due to increase in ash content in the raw coal as	Agreed & Complied.

	against the ash pond permitted in the Environmental clearance. The 100% fly ash utilization is to be achieved within 4 years in line with Fly ash Notifications dated 14.9.1999, 27.8.2003, 3.11.2009 and 25.1.2016 and amended time to time or extant regulations on fly ash utilization.	According to Fly Ash notification and as amended time to time on Fly Ash utilization, KMPCL Fly Ash has been utilized 100% in each of the operating units.
	e) In case of exceptional circumstances, project proponents may approach the Ministry for seeking permission to use an emergency ash pond with cogent reasons, if any	Noted & Agreed.
	f) The details regarding monthly generation, utilization and disposal of fly ash (including Bottom ash) shall be submitted to the Ministry and its Regional Office.	Complying. The details of Fly Ash Generation and utilization have been submitted to the Ministry & its Regional Office. Last FY 2020-21 Fly ash generation & utilization data is presented in Annexure-I .

ANNEXURE - I

Action Plan for FLY ASH UTILIZATION in KSK Mahanadi Power Company Limited., Nariyara, CG

(in million Tones)

S. No	Item Description	Sept 2015 – Aug 2016	Sept 2016 – Aug 2017	Sept 2017 – Aug 2018	Sept 2018 – Aug 2019	Sept 2019– Aug 2020	Sept 2020 – Aug 2021	Sept 2021 – Aug 2022
1	Expected Total generation of fly ash in million tonnes per annum	1.5	2	2.5	2.5	2.72	2.72	2.72
a	Use in Stowing and filling up of abandoned coal and other mineral mines	0.1	0.3	0.5	0.33	0.1	0.1	0.1
b	Use in filling up of abandoned stone quarry mines	0.05	0.1	0.15	0.15	0.15	0.15	0.15
c	Use in Fly Ash in brick manufacturing	0.05	0.05	0.05	0.1	0.18	0.18	0.18
d	Road development in surrounding areas	0.1	0.1	0.1	0.09	0.08	0.08	0.08
e	Use in Cement manufacturing	1.1	1.55	1.8	1.83	2.21	2.21	2.21
2	Expected Total Fly Ash Utilization	1.4	2	2.5	2.5	2.72	2.72	2.72
3	Expected Fly Ash Utilization (%)	93%	100%	100%	100%	100%	100%	100%

Fly Ash Generation & Utilization Report for FY 2020-21

S.N.	Description	Unit	Q1 (Apr, May, June-2020)			Q2 (Jul, Aug, Sept-2020)			Q3 (Oct,Nov,Dec-2020)			Q4 (Jan, Feb, Mar-2021)			Total Fly Ash Utilisation in FY 2020-21
			Unit-3	Unit-4	Unit-2	Unit-3	Unit-4	Unit-2	Unit-3	Unit-4	Unit-2	Unit-3	Unit-4	Unit-2	
A	Ash Generation (Fly Ash + Bed Ash)	MT	245211	256181	197583	225264	225863	210460	134854	141845	188157	220685	97254	213295	2356652
B	Ash Utilisation	MT	245211	256181	263995	225264	225863	246485	134854	141845	576146	205791	93028	259111	2873774
i)	Brick Manufacturing	MT	50	599	444	423	3154	0	0	0	5102	0	1268	6593	17633
ii)	Ready Mix Concrete	MT	174810	140908	11888	145194	85046	0	122990	129391	103544	200823	58952	28005	1201551
iii)	Low Lying area filling/ Area Development	MT	22744	7670	18094	0	44747	72754	0	0	16734	0	831	529	184103
iv)	Road Construction	MT	2915	7365	24697	13828	11906	9657	0	0	18131	0	825	0	89324
v)	Filling of abandoned stone quarry	MT	20234	74271	188618	45707	60180	146388	0	0	415798	0	26625	219336	1197157
vi)	Mines void filling	MT	0	0	0	0	0	0	0	0	0	0	0	0	0
vii)	Agriculture Utilisation	MT	0	0	0	0	0	0	0	0	0	0	0	0	0
viii)	If any other area (specify)- Bottom Ash storage at Dyke	MT	24458	25368	20254	20112	20830	17686	11864	12454	16837	19863	8753	19196	217675
	Total Ash Utilisation	MT	245211	256181	263995	225264	225863	246485	134854	141845	576146	220686	97254	273659	2907443
C	Ash Utilisation percentage	%	100%	100%	134%	100%	100%	117%	100%	100%	306%	100%	100%	128%	123%

ANNEXURE - II

PIEZOMETRIC BOREWELLS in KSK-MPCL

PZ-1



PZ-2



PZ-3



PZ-4



ANNEXURE - III

Railway Infrastructure facilities for Coal Transportation

Take-Off at Akaltara Exchange Yard



OHE Charged and S&T in Operation



Track on Track Hopper:



Coal Rake reception yard



Unloading at Track Hopper from Railway Wagons



Box-N Coal Wagon at Wagon Tippler



Water Sprinkler arrangements at Wagon tripler site



Maintenance of Track by Tie Tamping Machine



Merry Go Round railway system



Control Panel



ANNEXURE - IV

GREEN BELT DEVELOPMENT IN M/S KMPCL

Year	Areas of Plantation Inside Plant Premises.	Type of Plantation	Species	As on date total nos. of plants survived in Campus	Area Covered By Plantation (Ha.)
FY 2010-11 to FY 2017-18	Boundary Plantation Tarod Side, Labour Colony Road/Nursery area, Labour Colony Road to Time Off, Main Gate area, Guard Pond area, NH ROAD-Tarod Boundary, Avenue Plantation (DM Plant internal road) and NH ROAD-Banahil Boundary	New Plantation	Sisam, Peltocarpus, Satvan, Karanj, Siris, Simarua, Neem, Ganga imili, Pepal, Kadam, Cassia Siamia, Chinour, Arjuna, Mango, Bargad, Jamun, Amla, Gulmohar	380330	277 hectares i.e 33.3% of total project area (828.46 Hectares)
FY2018-19		Causality replacement		45980	
FY2019-20		Causality replacement		55000	
FY2020-21		New Plantation		36000	
Total				5,17,310	

Photographs for Plantation:



Main Gate roadside



Reservoir road side

Main gate to weigh bridge road



Near Reservoir, gate boundary wall



Near Ash Dyke Road



Near time office boundary wall



Boundary Wall side near Tarod village



Near Nursery



Near South Gate



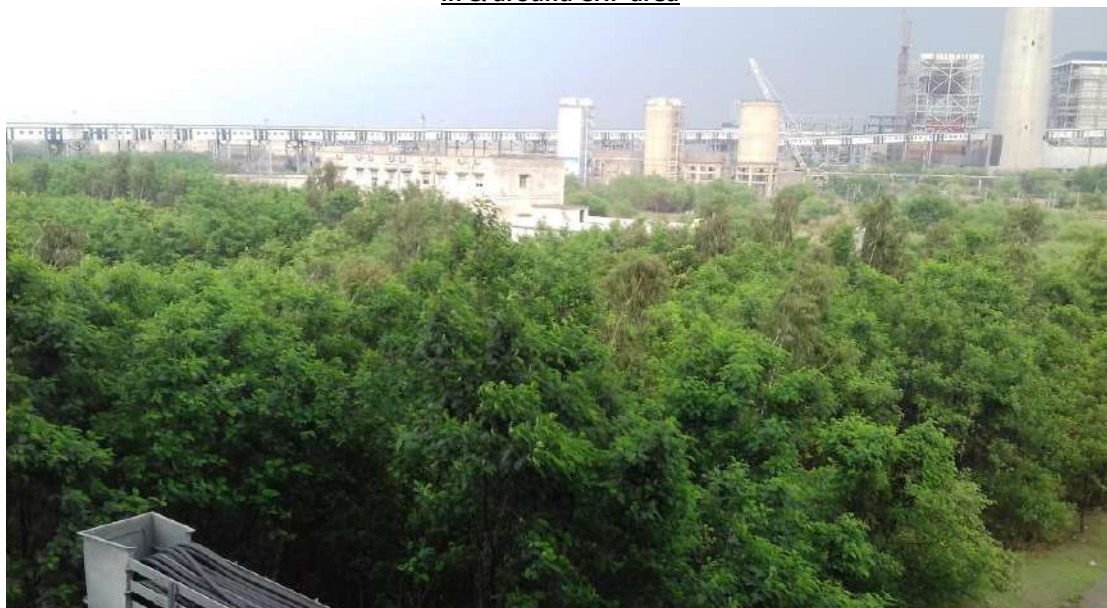
Around railway track



Around Coal yard



In & around CHP area



CHP area





DM plant roadside



Garden development in & around the plant premises



CHP Control Room



Reservoir side



In front of Cooling Tower



In front of CCR



Near Guard pond



Reservoir side



Main gate road side

Plantation at CHP area



Plantation near Coal yards of CHP area



Plantation near Crusher units of CHP area



Plantation near Coal Yards



Plantation near Coal Conveyers at CHP Area





Mass Plantation at all Internal Road sides of KMPCL





Mass Plantation around DM Plant



Mass Plantation back side of Nursery



Nursery



ANNEXURE - V

Corporate Social Responsibility – Expenditure from Oct.2020 to Mar. 2021

Sl.no.	Focus Area	Till Sept.-2020	Oct-2020 to Mar.-2021	Total
a1	Education	32643242	0	32643242
a2	Health Care	272527739	3202546	275730285
a3	Sustainable Development	26288733	0	26288733
a4	Infrastructure Development	160414490	253437	160667927
a5	Cultural & Community Support	21275967	1040016	22315983
a6	Miscellaneous expenses	7659863	291424	7951287
	Sub Total - (a)	520810034	4787423	525597457
b	Cost of Ambulance - (b)	512710	1623411	2136121
c	Total - (c) = (a+b)	521322744	6410834	527733578
d	Corporate Donations - (d)	21000000	0	21000000
	Grand Total	542322744	6410834	548733578
	In crore	54.23	0.64	54.87

CORPORATE SOCIAL RESPONSIBILITY

HALF YEARLY PROGRESS REPORT (October 2020 to March 2021)



KSK MAHANADI POWER COMPANY LIMITED
(GROUP COMPANY OF KSK ENERGY VENTURES LIMITED)

B. HEALTH CARE

Purchased New Ambulance for Better Health Services in Project Affected Villages

KSK Mahanadi Power Company Limited have organized rural health camps, school and anganwadi Health Check-up camp in project affected villages since 2009 to till date, similarly KMPCL also provide emergency health services to

surrounding villages. This is a 24 hours 7 days facility means our ambulance is always ready to provide services for any kind of emergency at village level. During this half year period from October 2020 to March 2021 we have purchased one new



Inauguration of New Ambulance for Provide Better Health Services

fully equipped emergency ambulance with oxygen cylinder, first aid box, auto starchier facilities available on this new emergency ambulance. Ambulance inaugurated by Mr. A. Venugopal Rao Sir (Sr. General Manager) in presence of Dr. G.K.Ojha Sir (GM-CSR) and this ambulance was dedicated to local peoples of project affected villages.

Emergency Ambulance Service provided to 99 villagers

The CSR department of KSK Mahanadi Power Company Limited is providing ambulance facilities to the persons of affected villages during emergency. Any kind of accident, urgency or emergency is informed to the CSR Department. Seeing the situation and availability of vehicle CSR ambulance is being provided. This is a 24 hours 7 days facility means our ambulance is always ready to provide services for any kind of emergency at village level. During the second half of the year total 99 people received benefit of emergency ambulance services. Villagers are getting larger benefit of this emergency ambulance service.

Sl	Village	Person Benefitted
1	Nariyara	33
2	Taroud	15
3	Rogda	23
4	Amora	02
5	Banahil	0
6	Murlidih	0
7	Latiya	08
8	Akaltara	01
9	Pakariya	01
10	Other	16
Total		99

Provide relief materials to Govt. Health Center (04 Nos.) for COVID-19 Pandemic

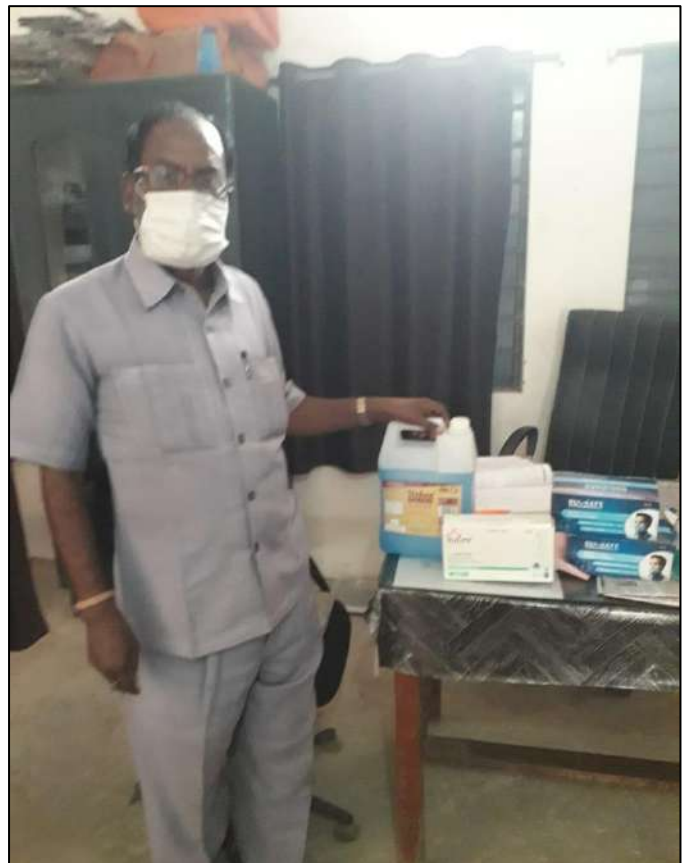
KMPCL have provided relief materials to 04 nos. Govt. Health Center of Nariyara, Taroud, Amora and Akaltara villages for fight against CORONA VIRUS (COVID-19) pandemic. In this sequence KMPCL provided medical prevention equipment like Face mask, Hand sanitizer, Hand wash, Dettol soap, Hand gloves, Surgical gloves Bleaching powder to 04 nos. Govt. Health Center of project affected

Relief materials to Govt. Health Centre for Covid-19 Pandemic						
Sr. No.	Item details	PHC Nariyara	SUB Health Centre Taroud	SUB Health Centre Amora	CHC Akaltara	Total
1	Face Mask	400 Pcs.	400 Pcs.	300 Pcs.	3300 Pcs.	4400 Pcs.
2	Hand Gloves	500 Pairs	600 Pairs	400 Pairs	4700 Pairs	6200 Pairs
3	Surgical gloves	400 Pairs	50 Pairs	-	400 Pairs	850 Pairs
4	Hand Sanitizer	30 Litres	30 Litres	25 Litres	100 Litres	185 Litres
5	PPE KIT	02 Set	-	-	2 Set	04 set
6	Thermal Scanner	01 Nos.	01 Nos.	-	01 Nos.	03 Nos.

villages. KMPCL also provided sodium hypo chloride chemicals for sanitization of inside and outside of govt. health center buildings. All activities are being done on regular basis.



Relief Materials Provided to Govt. Health Centre -Taroud



Relief Materials provided to Govt. Health Centre -Amora



Relief Materials Provided to Govt. Health Centre -Nariyara

D. INFRASTRUCTURE DEVELOPMENT

Installation of New Hand Pumps (13 Nos.) in 05 Project affected Villages

During the course of CSR activity we found that availability of drinking water is a major problem in the project affected villages of KMPCL. CSR Department identified the villager needs and most severely

Si.	Village	No. of Handpumps
1	Taroud	04
2	Amora	02
3	Latiya	02
4	Pakariya	03
5	Banahil	02
	Total	13

problematic area for drinking water in Taorud, Amora, Banahil, Latiya and Pakariya villages. Gram Panchayat identified the places for new hand pump installation. There are 13 new Handpumps installed in 05 project affected villages. These hand pumps will fulfil the need of drinking water of villagers.



New Handpump, Near Muktidham - Banahil



New Handpump, Ward No. 19- Taroud



New Handpump- Amora



New Handpump, Ward No. 01 Pakariya

Sr. No.	Village Name	Place of New Installed Hand Pumps
1	Taroud	Ward no. -20 , Near CSEB Sub Station
2	Taroud	Ward no. -09, Near Muktidham
3	Taroud	Ward No. 19, Akaltara- Janjgir Road
4	Taroud	Ward No. 12, Bajrang Chowk
5	Amora	Ward no-18, Nawapara
6	Amora	Ward no -06, Amora
7	Pakariya	Ward no- 1 ,Bhatapara
8	Pakariya	Ward no- 1 ,Bhatapara
9	Pakariya	Ward no.- 12, Sahupara
10	Latiya	Ward no. -13
11	Latiya	Ward no- 14, Bhatapara
12	Banahill	Ward no- 12, Ankorpath Mandir
13	Banahil	Ward no. 10 Bus Stand



New Handpump, Ward No. 20- Taroud



New Handpump, Ward No. 10, Bus Stand - Banahil



New Handpump, Ward No. 14- Latiya



New Handpump, Sahu Para- Pakariya

Repairing of 09 KMPCL & Govt. Handpumps at Amora ,Taroud , Banahil and Rogda villages

During this period, CSR department of KMPCL repaired 09 Govt. & KMPCL hand pumps of Nariyara , Taroud, Rogda & Banahil villages. This hand pumps were earlier installed by KMPCL at project affected village. Hand pumps were damaged and require repairing works in these villages. During the half year period from October 2020 to March 2021.

Si.	Village	Details of CSR Work	Place
1	Taroud	KMPCL Hand pump	Near Sahu Para Ward No. 13
2	Taroud	KMPCL Hand pump	Near Canal Road
3	Banahil	KMPCL Hand pump	Near Damadpara
4	Rogda	KMPCL Hand pump	Near Govt. School
5	Amora	KMPCL Hand pump	Near Panchayat Bhawan
6	Banahil	KMPCL Hand pump	Behind Govt. Middle School, Ward No. 10
7	Banahil	KMPCL Hand pump	Near Jhalmla Road
8	Amora	KMPCL Hand pump	Near Amanara
9	Amora	KMPCL Hand pump	Near Sidha Baba Mohlla, Ward no. 17

Villagers are happy by getting Hand pumps repaired and receiving uninterrupted drinking water supply in summer season.



Repairing of Handpump Banahil



Hand Pump Repairing Amora



Repairing of Handpump Banahil

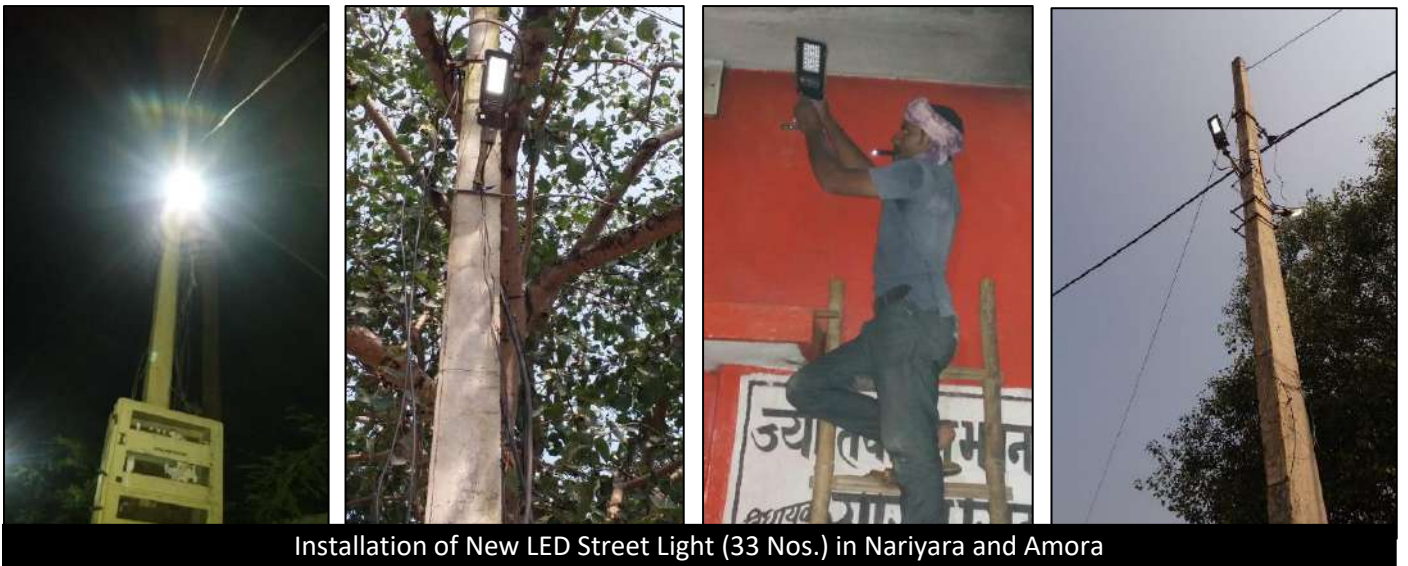
LED Street Light Enlighted on Electric Poles of 05 Project Affected Villages

During the 3rd quarter of this year, KSK Mahanadi Power Company Limited has provided support for street light fitting in Nariyara and Amora villages. Due to establishment of KSK Mahanadi Power Company Limited, villager's movement is increased up to late night. Villagers demanded for street light fixing in electric poles. Initial phase KMPCL have fitted Led street lights (24 watts) on Nariyara (08 nos.), Amora (25 nos.) Rogda (10 Nos.), Latiya (15 Nos.) and Dongakohroud (15 Nos.)

Si	Village	Street Light in Nos.
1	Nariyara	08
2	Rogda	10
3	Amora	25
4	Latiya	15
5	Dongakohroud	15
Total		73

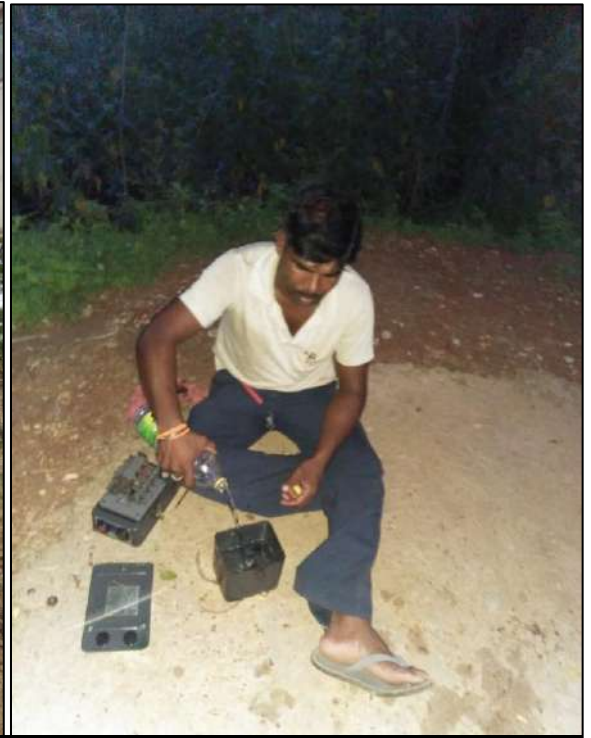
Electric poles of Gram Panchayats. Now

these villages light up with street-lights fitted by KMPCL.



Repairing work of submersible pump (3 HP) Near Muktidham of Nariyara

Sarpanch Gram
panchayat Nariyara
has requested to
KMPCL CSR
Department for the
repairing work of
starter Panel of
Submersible Pump
(3HP) at Near
Muktidham, ward No
18 in Nariyara. This
Submersible pumps
(3HP) is used to supply
drinking water in
Ward no. 18 of
Nariyara and became



Repairing work of starter Panel of Submersible Pump (3HP) Near Muktidham & Sanjay Nagar – Nariyara

defunct few days, and villagers were unable to get the drinking water. As per request KMPCL has repaired starter panel of Submersible Pump (3HP) of Nariyara. Now villagers are getting regular drinking water.

Repairing work of Gate Valve of OHWT – Nariyara and Rogda To provide better drinking water supply KMPCL is structuring Drinking Water Project in Nariyara & Rogda village. One Overhead Water Tank (OHWT) of 1 lakh litter capacity is constructed at near Pathrapara- Nariyara & similarly 01 OHWT construct in Playground of Rogda village & established submersible pump on pump house and connected it to water pipe line supply. Main valve of OHWT was found damaged with leakage so people were not getting proper water supply. As per the request of Sarpanch Gram panchayat KSK Mahanadi Power Company Limited has successfully repaired both main valve of Rogda and Nariyara. Villagers are getting regular drinking water supply.



Repairing of Gate valve on Overhead water tank – Nariyara and Rogda

Pipe Line Repairing work at Rogda Village

During this half year period from October 2020 to March 2021 CSR department of KMPCL have done pipe line repairing work in different ward/places of Rogda village. Water level is very down in Rogda village. Ponds and some hand pump were getting dry during summer season. Villagers was facing problem for daily uses and animal health care. KMPCL pipe line expanded across the village Rogda (3435 Meter), but this pipe line was leaked from many points from few days, so that drinking water supply was disturbed. CSR department has replaced old damaged pipe with new pipes and all repairing/welding work is completed by expert pipe line mechanic/welder. Villager are happy and getting interrupted drinking water supply.



Pipeline repairing work at Rogda village



Bhatapara- Rogda



Near OHWT- Rogda



Near Bastipara- Rogda

Repairing work of main valve of pipe line and OHWT - Amora

To Provide better drinking water supply Govt. PHE Department is structuring Drinking Water Project in Amora village. One Overhead Water Tank (OHWT) of 1 lakh litter capacity is constructed of ward no. - 06 near Sidhbaba Mohalla at Amora village and established submersible pump and constructed pump house and connected it to water pipe line supply. Last month main valve of OHWT was found damaged with leakage so people were not getting proper water supply. As per the request of Sarpanch Gram panchayat KSK Mahanadi Power Company Limited has successfully installed 01 Nos of main valve and repaired pipe line near OHWT of Amora village. Now villager are getting regular drinking water facilities.



Repairing of OHWT Main Valve - Amora

Playground Leveling Work at Rogda

KMPCL provide support to youth cricket club for leveling work of playground near OHWT at Rogda. This is only one playground of Rogda village earlier KMPCL constructed boundary wall and bore well for sports activities. As per the request of Youth Cricket Club & Gram Panchayat Rogda, KMPCL has started leveling of playground with JCB machine. Now playground is ready and children are playing games and sports daily in the evening.



Playground Leveling work at Rogda

Installation of Western Toilet – Latiya

KSK Mahanadi Power Company Limited has continuously taking care of his social responsibilities about workers/employees of KMPCL Project Affected villages. In this sequence, Gram Panchayat Latiya has requested to KMPCL regarding installation of western toilet in Mr. Anand Sahu (Handicapped) house, as he was injured right leg an road accident inside the plant premises and his also belongs from land affected families, as per gram panchayat request, CSR department of KMPCL installed one western toilet with water tank in Mr. Anand Sahu house. Family of Anand Sahu is happy by getting western toilet facilities in house. And Gram Panchayat and ward members thanked to KMPCL about this humanity work.



Toilet Installation Anand Sahu House

Road Cleaning and Water Sprinkling Work – Taroud

Gram Panchayat Taroud has requested to KMPCL regarding cleaning work of main road of Taroud village due to transportation of heavy vehicles road condition is poor so villagers are facing dust pollution, due to this health related problem increase in local peoples, So KMPCL started road cleaning work and water sprinkling through water tank in both side of main road from Near Anand Dhaba to Bus Stand Taroud. After this work road is now clean & Gram Panchayat and ward members thanked to KMPCL about this humanity work.



Road Cleaning and Water Sprinkling work in Taroud

Repairing work of submersible pump (02 Nos.) at Nariyara village

Sarpanch Gram
panchayat Nariyara
has requested to
KMPCL CSR
Department for the
repairing work of
Submersible Pump
(5HP) at Near
CSPDCL office, ward
No 01 & Near
Ramgudhi (1 HP), in
Nariyara. Above
Submersible pumps
(is used to supply



Repairing work of starter Panel of Submersible Pump (5HP) Near Muktidham & Sanjay Nagar – Nariyara

drinking water in Ward no. 01, 02 and 06 of Nariyara and became defunct few days and villagers were unable to get the drinking water. As per request KMPCL has repaired both Submersible pump's of Nariyara. Now villagers are getting regular drinking water supply.

C. CULTURAL AND COMMUNITY SUPPORT

Provided Donation for Durga Puja festival

KSK Mahanadi Power Company Limited, provided donation to organize Durga Puja and Vijadashmi Utsav to various religious committees of Project affected Villages. KMPCL respect and encourage maintaining the communal and religious harmony in neighboring villages. During the month of September total 21 Puja samitis from 08 project affected villages.

Si	Village	No. Of Puja Samitis
1	Nariyara	09
2	Taroud	02
3	Amora	03
4	Rogda	01
5	Banahil	01
6	Latiya	01
7	Pakariya	02
8	Akaltara	02
Total		21

Provided Support for organizing Kabaddi Tournament at Taroud

KSK Mahanadi Power Company Limited provided financial assistance to promote local games and sports in project affected villages. Regional Level Kabaddi Tournament is organized every year by Jai Maa Mankeshari Khel Samiti, likewise this year Jai Maa Mankeshari Kabaddi Samiti and Gram Panchayat Taroud requested KMPCL to provide financial assistance to organized Kabaddi tournament at Taroud Village. There are total 42 team participated in Kabaddi tournament. This program organized from 16th to 18th February 2021 near Gondwana



Provided Support for Organizing Kabaddi Tournament at Taroud

Cultural Bhawan of Taroud. Tournament inaugurated by Mr. Gram Panchayat Taroud in auspicious presence of Shri Shiv Kumar Tiwari, Shri Santosh Bhedpal, Shri Suresh Singh and Premlal Yadav. Final Match played between Raseda and Parsada, winning team has been awarded by Sarpanch Gram Panchayat and Shri Parmeshwar Patley.

Provided Support for organizing Cricket Tournament at Taroud

KSK Mahanadi Power Company Limited provided financial assistance to promote local games and sports in project affected villages. As per the request of Jai Ma Mankeshari Cricket Club Taroud, KMPCL provided support for organizing cricket tournament, this tournament organized at



Provided Support to Organize Cricket Tournament at Taroud Village

Khel Parisar Taroud from 5th January to 25th January 2021. In the final match Mr. Gurudyal Patley participated as chief guest, on this occasion Shri Parmeswar Patley, Shri Vinod Patle, Shri Jeevan Patle, Shri Savita Nandan Sahu, Shri Vivek Pandey from CSR-KMPCL and Other villagers were also present.

Provided Support for organizing Cricket Tournament at Rogda

KSK Mahanadi Power Company Limited provided financial assistance to promote local games and sports in project affected villages. As per the request of Royal Cricket Club Rogda, KMPCL provided support for organizing cricket tournament, this tournament organized at Khel Parisar Rogda from 10 January to 28th January 2021. In the final match Mrs. Anita Das Mahant, Mr. Basant Barman,



Provided Support to Organize Cricket Tournament at Rogda Village

participated as chief guest, on this occasion Shri Liladas Mahant , Shri Jeevan Kurrey and Other villagers were also present.

Provided Support for organizing Shri Mad Bhagwat Katha in Amora

Villagers of Gram Panchayat Amora organized Shri Mad Bhagwat Katha Saptah from 3rd to 8th March 2021. To create a better religious environment and maintain community harmony, villagers organize Shri Mad Bhagwat Katha Saptah. As per request of villagers and gram panchayat Amora, KSK Mahanadi Power Company Limited, provided financial support for mike tent and sound system for organizing Shri Mad Bhagwat Katha Saptah. Villagers are very happy and thanked KSK Mahanadi Power Company Limited for providing valuable support.



Provided Support for Organizing Shri Mad Bhagwat Katha Saptah -Amora

ANNEXURE - VI

Annexure-VI

Particulate Matter Emission's Result (mg/Nm³)			
Month	Unit # 3 (600 MW)	Unit # 4 (600 MW)	Unit # 2 (600 MW)
Oct-20	33	37	24
Nov-20	34	38	23
Dec-20	37	40	24
Jan-21	39	37	26
Feb-21	36	39	25
Mar-21	38	Shut down	27
Average	36	38	25

ANNEXURE - VII

Details of Dust extraction and dust suppression systems

1. Bag filters installed at Coal transfer sections:

Junction No.TT-1



Junction No.TT-2



Junction No.TT-3



Junction No.TT-6



2. Dust Suppression System (DSS) & Dry Fog Systems (DFS) installed at Coal Conveyor Systems

DSS at Conveyers



DFS systems at material transfer points



3. Gun Sprinklers are installed at Coal Yards



4. Bag filter installed above Ash SILOs



ANNEXURE - VIII

Photographs for Sewage Treatment Plant installed in KMPCL



ANNEXURE - IX

IMAGES OF RAIN WATER HARVESTING MEASURES IMPLEMENTED IN KMPCL



Figure 1- Recharge Well No 1



Figure 2 Recharge Well No 2



Figure 3 Recharge Well No-3



Figure 4 Recharge Well No-4

Storm water collection well for recharge the ground





Annual Runoff Calculations:

Annual Run off Calculations				
Catchment	Area (Sq.Mtrs)	Run-Off Coeff.	Av. Annual Rainfall(mm)	Total Run off per annum (KL)
Total Road area	131753	0.9	1157	137194.3989
Other Open area	1948247	0.6	1157	1352473.067
Total Site area	2080000			1489667.466

RECHARGE WELL CALCULATIONS

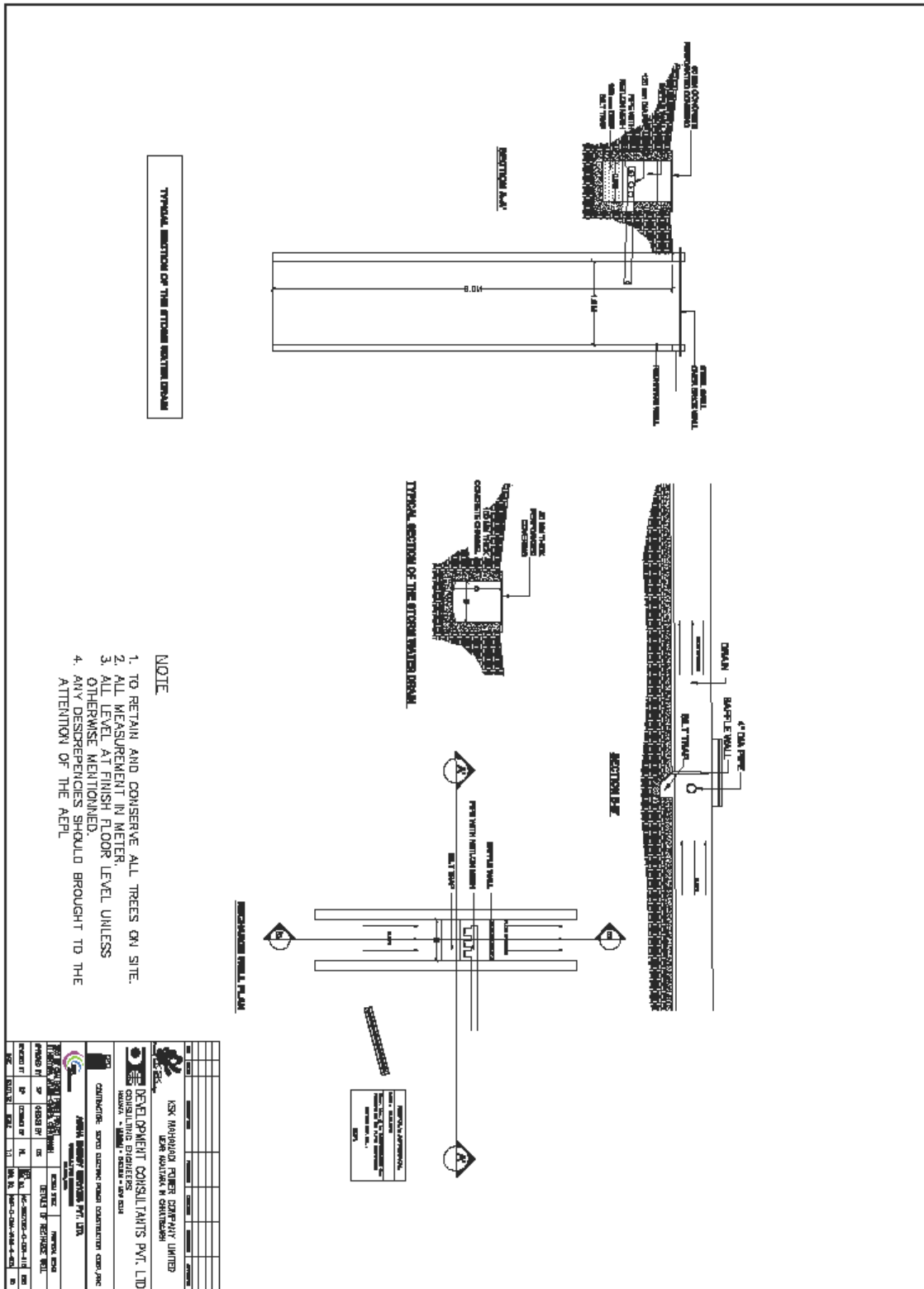
Volume of one recharge well:

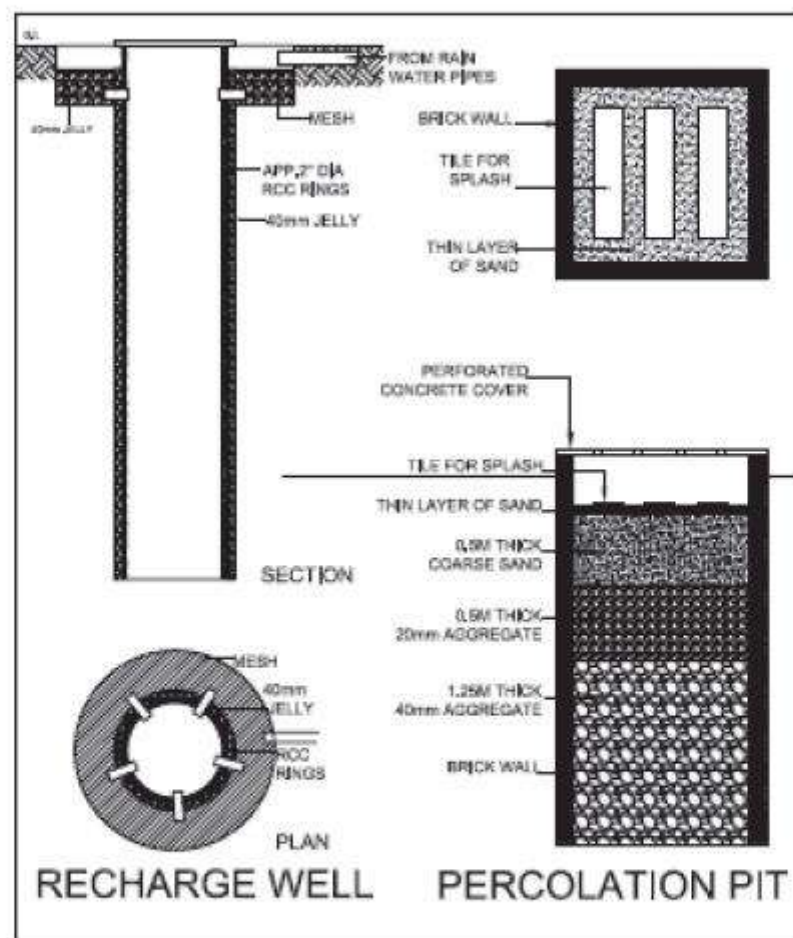
Description	Qty	units
Diameter	1.5	m
Radius	0.75	m
Depth	6	m
Volume	10.59	cubic meters

Total of 147 recharge wells with a combined volume of 1579.027 cubic meters Over and above this, we can assume a 30% recharge rate.

This means that even while the well is filling up with rainwater, at the same time recharge is happening. Therefore the effective capacity will be 30% more

Effective recharge capacity- 2052.735 cubic meters





The recharge well and a percolation pit

ANNEXURE-X

1. Fire Lines facilitate at Coal Yards



2. Full-fledged Fire Tenders available at site:



ANNEXURE - XI

Annexure - XI

Table-1 depicted the concentration of **Hg, Cr, As, Pb** parameters in ground water quality around Ash Dyke area is compared with the baseline data.

S.No.	Parameters	Units	Baseline data	Results in Sept-2020	Remarks
1.	Hg	mg/l	<0.001	<0.001	Results are well within limit
2.	Cr	mg/l	<0.05	<0.05	
3.	As	mg/l	<0.01	<0.01	
4.	Pb	mg/l	<0.01	<0.01	

ANNEXURE - XII

अध्यक्ष

वसन्ती अतिथियों का शुभ

दिनांक : 23.10.2009

स्थान : शा. बालक उ.मा शा.

सीजन्य ठिकैदार सुयश वि

बिलासपुर

कार्यालय नगर पंचायत धौदरी, जिला

॥ निवृत्ति आश्रमस्य सत्यता ॥

[illegible]

क्र.	विषय	अनुमति प्राप्त दिनांक	अवधि
1	बडोडा जल संयंत्र	1.11.2018	24000
2	बडोडा जल संयंत्र	1.11.2018	24000
3	बडोडा जल संयंत्र	1.11.2018	24000
4	बडोडा जल संयंत्र	1.11.2018	24000
5	बडोडा जल संयंत्र	1.11.2018	24000
6	बडोडा जल संयंत्र	1.11.2018	24000
7	बडोडा जल संयंत्र	1.11.2018	24000
8	बडोडा जल संयंत्र	1.11.2018	24000
9	बडोडा जल संयंत्र	1.11.2018	24000
10	बडोडा जल संयंत्र	1.11.2018	24000

निम्नलिखित बातें ध्यानपूर्वक पढ़ें।

ਸ਼੍ਰੀ ਭਗਵੰਤ ਸੋਦਰੀ

ANNEXURE - XIII

From: ENV.KMPCL
Sent: 28 November 2020 17:13
To: 'ecompliance-cg@gov.in'
Cc: 'Head Office CECB'; Robilaspur Bsp
Subject: Six Monthly EC Compliance Report from Apr'20 to Sept'20 in M/s KSK Mahanadi Power Company Ltd., Village-Nariyara, Akaltara, CG.-Reg.
Attachments: Six Monthly EC Compliance Report-Apr'20 to Sep'20_ 28.11.2020.pdf

Dear Sir,

Greetings from M/s KSK Mahanadi Power

With reference to Environmental Clearance accorded to M/s KSK Mahanadi Power vide Ref. Letter No- J13012/44/08 -IA.II(T) Dated 19.10.2009 and subsequent amendment & extended of validity upto vide Ref. Letter No- J-13012/44/2008-IA.II (T), Dated 19.04.2018, we are pleased to submit herewith the Environmental Clearance Compliance Report of last Six Months updated status i.e from **April-2020 to September-2020** (as attached) for our 6x600MW Thermal Power Plant, (3x600MW-Operational) located at village: Nariyara, Tehsil-Akaltara, Dist.-Janjgir-Champa, Chhattisgarh.

This is for your kind perusal and necessary record please.

Thanking you,
Your's Sincerely

Environment Dept.
M/s KSK Mahanadi Power Company Ltd.
Village: Nariyara, Tehsil-Akaltara,
Dist.-Janjgir-Champa, Chhattisgarh.
Ph-08897509968

**KSK Mahanadi Power Company Limited**

CIN No. : U40300TG2009PLC064062

Works

Near Nariyara Village,
Akaltara Tehsil,
Janjgir - Champa District,
Chhattisgarh Pin : 495553
Tel (Site): 07817-284001

Registered Office

8-2-293/82/A/431/A,
Road No. 22 Jubilee Hills
Hyderabad - 500033,
Tel: +91-40-23559922-25
Tel: +91-40-23558701
Fax: +91-40235530

Ref.:MoEF&CC,NPUR/BPSN/2500108/911**28th Nov. 2020****To**

**The Addl. Principal Chief Conservator of Forests (C),
Ministry of Environment, Forest and Climate Change,
Regional Office (WCZ), Ground Floor, East Wing,
New Secretariat Building Civil Lines,
Nagpur-440001
Maharashtra**

Sub: -Six Monthly Status of Compliance for Environmental Clearance granted to **6x600 MW** Coal Based Thermal Power Project located in village: Nariyara, Tehsil-Akaltara, District-Jangir, Champa, Chhattisgarh by M/s KSK Mahanadi Power Company Limited,- Reg.

Ref: - i) Ministry's Letter No. - J13012/44/08 -IA.II (T), Dt. 19.10.2009
ii) Re-validation Letter No. - J-13012/44/2008-IA.II (T), Dt. 19.04.2018.

Sir,

With reference to the above subject, please find herewith the enclosed Environmental Clearance Compliance Report of last six months updated status i.e from **April-2020 to September-2020**.

For favour of your kind information and record please.

Thanking You.

Your's sincerely,

For **KSK Mahanadi Power company Limited**

**Dr.M.V.R.N Acharyulu
(Authorized Signatory)**

Encl: Six Monthly Environmental Clearance Compliance Report- **Apr'20 to Sept'20**.

Copy to: (1) The Member Secretary, CECB, Atal Nagar, Raipur, Chhattisgarh.

(2) The Regional Officer, CECB, Bilaspur, Chhattisgarh.

ANNEXURE - XIV

**KSK Mahanadi Power Company Limited**

CIN No. : U40300TG2009PLC064062

Works

Near Nariyara Village,
Akaltara Tehsil,
Jenagir - Champa District,
Chhattisgarh. Pin : 495553
Tel (Site): 07817-284001

Registered Office

8-2-293/82/A/431/A,
Road No. 22 Jubilee Hills
Hyderabad - 500033,
Tel: +91-40-23559922-25
Tel: +91-40-23558701
Fax: +91-40-235530

Ref. No: CECB, BILAS/PDKN/2500108/655**Date: 10.09.2019**

To
The Regional Officer,
Chhattisgarh Environment Conservation Board,
Vyapar Vihar, Near Pt. Deendayal Upadhyaya Park,
Bilaspur, Chhattisgarh.

Sub: - Submission of Environmental Statement (Form-V) for last Financial Year 2019-20-Reg.

- Ref: -i)** Consent for Operation No. – 763/TS/CECB/2015 Dt. 22.05.2015
ii) Renewal Consent for Operation No.1602/TS/CECB/2018 (Air) and 1600/TS/CECB/2018 (Water)
Dtd.14.05.2018 Dtd. 14.05.2018
iii) Environmental Clearance No. (Amendment & Extended of Validity)-13012/44/2008-IA.II (T)
Dt.19.04.2018 & J-13012/44/2008-IA.II (T), Dt.19.10.2009
iv) Rule-14 of Environmental (Protection) Rule, 1986

Sir,

In inviting references to the above captioned subject and cited references, please find herewith the enclosed '**Environmental Statement**' in **Form-V** for last Financial Year **2019-20** in M/s KSK Mahanadi Power Company Limited (**3 x 600MW-Operational Units**), village-Nariyara, Akaltara, Chhattisgarh.

Submitted for your kind Perusal and records please.

Thanking You,
Yours faithfully,

For KSK Mahanadi Power company Limited

Dr.M.V.R.N Acharyulu
(Authorized Signatory)

Encl: Environmental Statement in Form-V- FY 2019-20.

Copy to: i) The Member Secretary, Paryavas Bhavan, North Block Sector-19, Atal Nagar Dist- Raipur (C.G.)-492002.

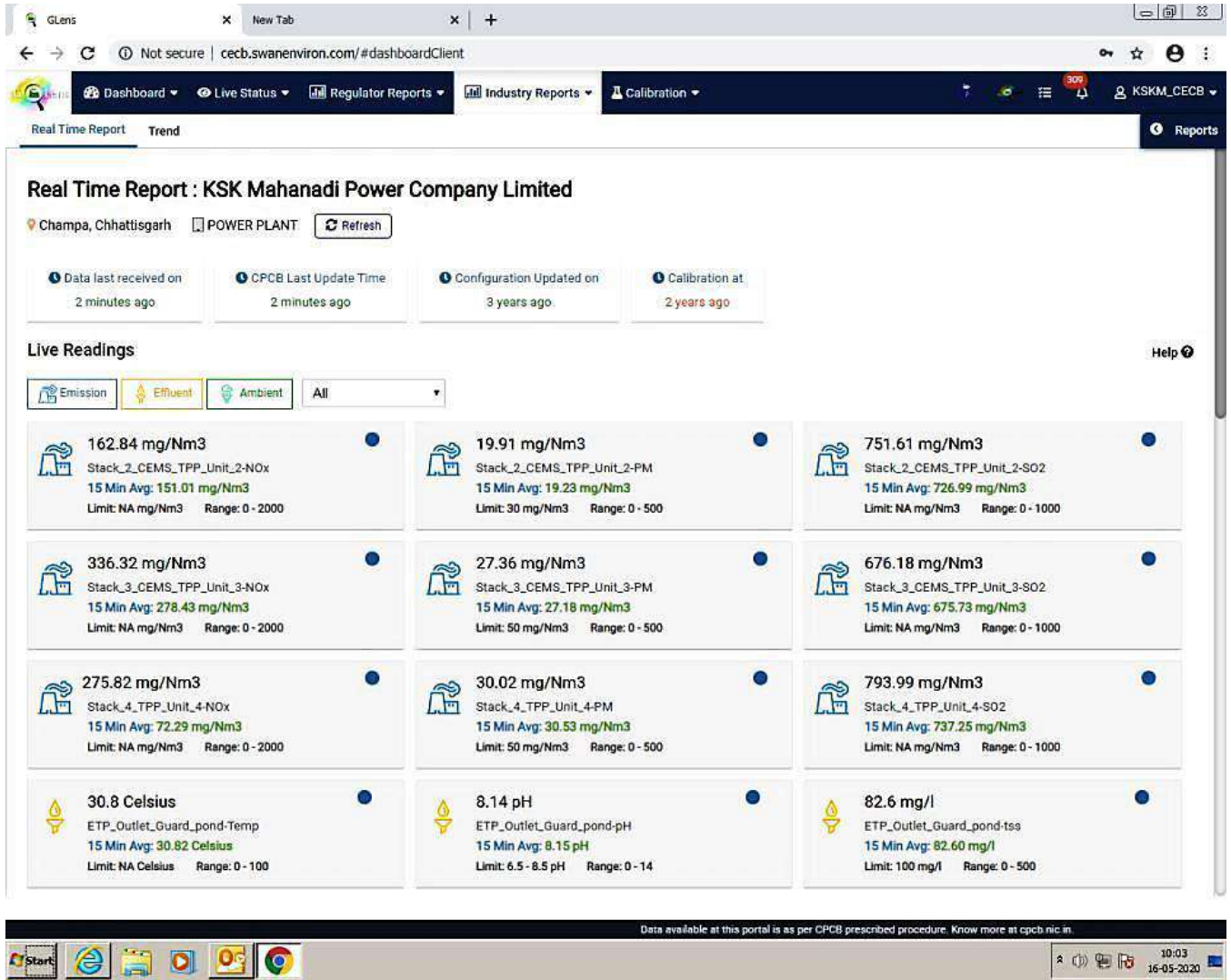
ii) The Addl. PCCF(C), MoEF &CC, Regional Office (WCZ), Nagpur, Maharashtra



ANNEXURE - XV

Photographs of Online Monitoring equipments installed in KMPCL

1. Screenshot for Real time data transmission for CEMS, CEQMS & CAAQMS to CPCB Sever through G-Lens software:

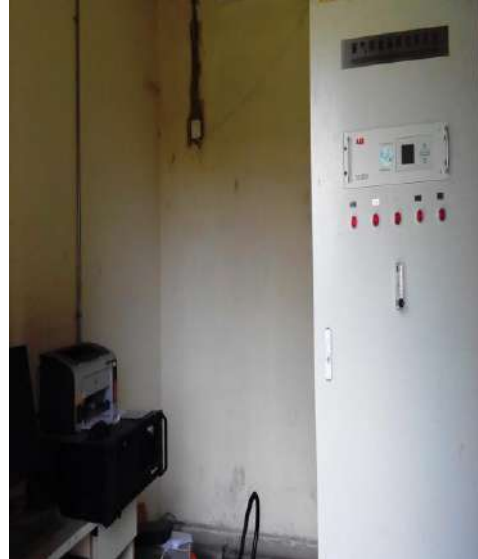


2. CEMS installed at Stack-I, II & III:

Dust Monitor



SO₂, NO_x & CO Analysers and Dust Monitor



3. CEQMS installed in Guard Pond Water:



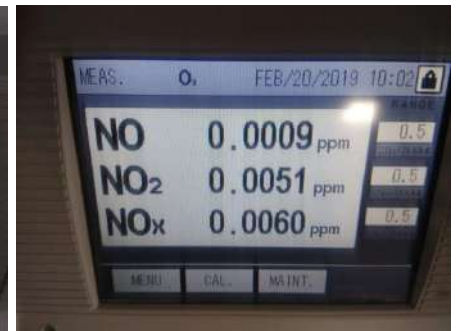


4. CAAQMS installed at 04 different locations inside Campus.

I) CAAQMS-1 installed in Main Gate



CAAQMS readings display at Analysers



ii) CAAQMS-2 installed near Switch Yard.



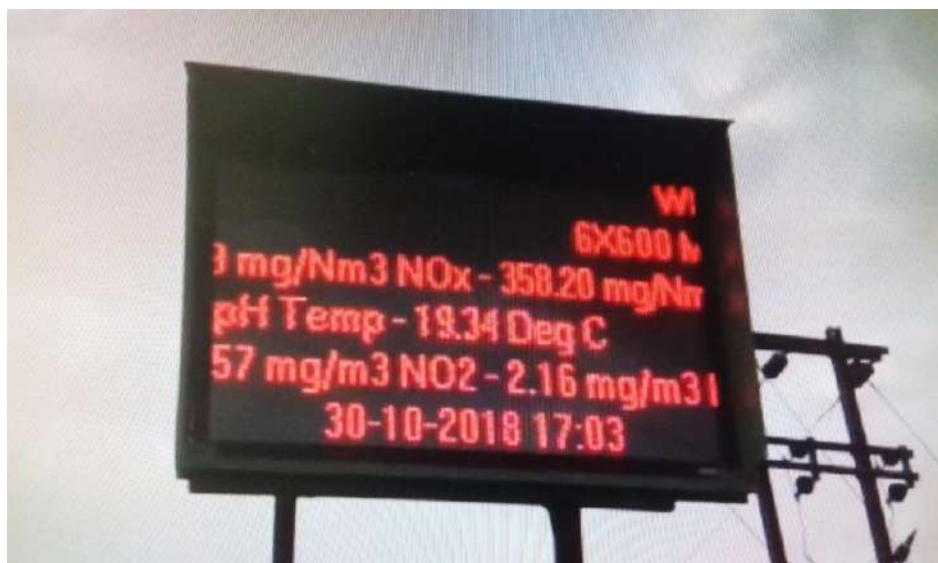
iii) CAAQMS-3 installed at Sub-station.



iv) CAAQMS installed at Camp office.



5. Display Board showing online status of Environmental Parameters at Main Gate:



ANNEXURE - XVI

Precautionary measures for Fugitive emission control at site.

1) Thick layer of green belt developed around plant boundary to arrest fugitive emission:



2) Bag filters installed at Ash SILO and Raw materials handling systems:



3) Water Sprinklers installed at Dust prone areas:



ANNEXURE - XVII

Ash & Sulphur content of received Coal from Oct.-2020 to Mar.-2021

Month	Received Coal (MT)	Ash Content (%)	Sulphur (%)
Oct-20	760626	36.4	0.38
Nov-20	586026	36.5	0.38
Dec-20	317845	35.2	0.38
Jan-21	340897	34.8	0.38
Feb-21	501979	36.5	0.38
Mar-21	483457	36.4	0.37
Total	2990829	36.0	0.4

Annexure-XVIII

Unit Wise Status of progress of FGD installation to control SO_x emission to comply with the emissions standards notified by the MoEF&CC on 7th December 2015, stipulating norms for PM, SO_x, NO_x, Mercury and Water.

1. Name of the thermal power plant and capacity: KSK Mahanadi Power Company Limited, Nariyara, JanjgirChampa District, Chhattisgarh– (capacity 6x600 MW)

SN.	Unit no.	Capacity	Applicable SO ₂ norms (100, 200 or 600 mg/Nm ³)	FGD Technology selected	Time line as per MOEF & CC notification 31.03.2021	Feasibility Study completed	Tender Specification made	NIT issued	Bid Opened	Bid Awarded	Construction progress (%)	Remarks/pre sent status
1	III	600 MW	200	Wet lime stone based FGD	31.12.2024	1.5.2019	3.7.2020	31.01.20	Yet to complete job	Yet to award	0%	Plant under NCLT. Technical bids floated and yet to complete process identification of EPC contractor
2	IV	600 MW	200	Wet lime stone based FGD	31.12.2024	1.5.2019	3.7.2020	31.01.20	Yet to complete job	Yet to award	0%	Plant under NCLT. Technical bids floated and yet to complete process identification of EPC contractor Technical bids floated and yet to complete process identification of EPC contractor
3	II	600 MW	100	Wet lime stone based FGD	31.12.2024	1.5.2019	Made	31.01.20	Yet to complete job	Yet to award	0%	Plant under NCLT. Technical bids floated and yet to complete process identification of EPC contractor

Annexure-XVIV

Annexure-XVIV

The details of coal used in KMPCL for previous FY 2020-21								
Months	Coal Source	Mode of transport	Distance from Power Plant	Quantity Received (MT)	Quality of Coal			
					Avg. Ash content (%)	Sulphur (%)	Moisture Content (%)	Average Calorific Value of coal (Kcal)
Apr-20	Gevra Mines, SECL,	70% Railway & 30% Road mode	within 200KM-300KM	570889	35.6	0.42	22	3660
May-20	KJSL Washery,			585377	34.9	0.39	22	3645
Jun-20	Dhatura, SECL,			749667	34.9	0.41	22	3740
Jul-20	Manikpur Mines,			622862	35.0	0.40	22	3687
Aug-20	SECL, Chhal Mines,			546542	35.1	0.38	22	3676
Sep-20	SECL, Basundhara, IB			568149	36.3	0.37	22	3631
Oct-20	Valley, MCL,			760626	36.4	0.38	22	3646
Nov-20	Belpahar, IB Valley,			586026	36.5	0.38	22	3676
Dec-20	MCL,Rajnagar, Rewa,			317845	35.2	0.38	21	3635
Jan-21	CIC, Mohan, Rewa,			340897	34.8	0.38	22	3668
Feb-21	CIC, Pondri Hills,			501979	36.5	0.38	21	3606
Mar-21	Rewa, CIC etc.			483457	36.4	0.37	21	3554
Total/Avg.				6634316	35.6	0.4	21.8	3651.8