



# ADHUNIK POWER & NATURAL RESOURCES LTD.

(Formerly Adhunik Thermal Energy Limited)

Office : Village Padampur, Behind PGCIL Substation, Adityapur, Kandra Road, P.O: Kandra  
Saraikola-Kharsawan, Jharkhand-832 402 \* PHONE : 0657 6628400 \* FAX : 0657 6628440  
Website : www.adhunikgroup.com

Ref: MOE&F, RNC/HYC/RA/251219/02

Dated: 20.12.2019

To,

Regional Office (ECZ),  
Ministry of Environment, Forest and Climate Change,  
Bungalow No. A-2, Shyamali Colony,  
Ranchi – 834002

Sub:- Submission of Half yearly compliance status report (Unit II) for the period – April 2019 to September 2019,-Reg.

Ref:- MoEF EC letter No.J-13012/8/2009-IA.II(T), Dated 09th May 2011.

Sir,

With reference to the above referred Environmental Clearance, we are pleased to submit herewith the half yearly compliance status report (Unit II) for the period of April 2019 to September 2019.

This is for your reference and record, please.

Thanking you,

For Adhunik Power & Natural resources Limited

  
(Authorized Signatory)

Encl: As Above

Copy to:

- 4) Central Pollution Control Board, Kolkata
- 5) Member Secretary, Jharkhand State Pollution Control Board, Jharkhand
- 6) Regional Officer, JSPCB, Jamshedpur



  
27/12/19



Regd. Office : 14, Netaji Subhas Road, II-Floor, Kolkata - 700 001. Phone : 2243-4355, 2242-8551

Workse: Padampur, Saraikela, Kharsawan, Jharkhand

CIN U40101WB2006PLC102935

# REPORT

**ENVIRONMENTAL COMPLIANCE STATUS REPORT  
FOR  
EXPANSION OF 1X270 MW COAL BASED POWER  
PLANT  
(Unit II)**



**APRIL 2019 – SEPTEMBER 2019**

**Adhunik Power & Natural Resources Limited  
Village: Padampur, Behind PGCIL Substation  
Kandra Chouka Road, Saraikela-Kharsawan  
Jharkhand**

**Adhunik Power & Natural Resources Limited**  
**Vill: Padampur, Behind PGCIL Substation, Kandra Chouka Road, Saraikela-Kharsawan, Jharkhand**

**Environmental Clearance Letter No: J13012/8/2009-IA .II (T) dtd 9th May 2011.**

**Period Of Compliances: April 2019 to September 2019**

Sl No	EC Conditions	Status as on 30 <sup>th</sup> September 2019
<b>A. Specific Conditions:</b>		
i.	Environmental clearance for the proposed expansion shall be applicable only for addition of 1x270 MW out of proposed addition of 3x270. However at a later stage when firm coal linkage for second and third units of 270 MW are also available, the project proponent may request the Ministry for inclusion of second and third units i.e. 2x270 MW, which the Ministry shall consider appropriately.	Noted
ii.	The Ministry had Issued a draft Notification on 30 <sup>th</sup> March, 2011 vide S.O. 691(E) under the Environment (Protection ) Act, 1986 notifying the areas upto 5 km from the boundary of the protected area of Dalma Wildlife Sanctuary in the State of Jharkhand as the Eco-sensitive Zone. The necessity of obtaining environmental clearance from the National Board for Wild life would arise only if the proposed project area falls within the boundary of the finally notified eco-sensitive zone.	As per notification date 29 <sup>th</sup> March 2012 project boundary are beyond the stipulated distance from the boundary of the protected area of Dalma Wildlife Sanctuary in the State of Jharkhand as the Eco-sensitive Zone. Notification regarding nearest distance from Dalma wildlife sanctuary enclosed as <b>Annexure I</b> . <b>Complied</b>
iii.	Wildlife conservation plan shall be implemented during the development of project itself and the status of implementation shall be submitted to the Ministry from time to time.	The Wild Life Management Plan (WLMP) has prepared already been approved by PCCF, Ranchi on May'10,2010. <b>Complied</b>
iv.	Vision document specifying prospective plan for the site shall be formulated and submitted to the Ministry within six months.	Vision document report has submitted at MoEF on 30 <sup>th</sup> Dec 2011. <b>Complied</b>
v.	Possibility for harnessing solar power within the premises of the plant (particularly at available roof tops) shall be examined and status of implementation shall be submitted.	Installation of solar light system in all vulnerable area for are completed. Copy of Work Order with photographs are enclosed as <b>Annexure II</b> for your kind reference.
vi.	Transport of coal shall be by rail only. The project proponent shall accordingly take up the matter with the Railways. Status of implementation shall be submitted to the Regional Office of the Ministry from time to time.	We are transporting most of Materials (Coal) by rail through railway siding at Brirajpur & PAPK, but due to shortage of rack allotment by Railways , we are transporting the materials by road to fulfil the requirement of coal otherwise plant could not run on full capacity.
vii.	A study shall be undertaken by an organization of repute such as RIT, Jamshedpur on source sustainability of water, based on the data of the source of water (Subarnarekha River) for the last 50 years and a report submitted within six months.	Water sustainability report has been prepared by IIT Kharagpur. Report was already submitted to MoEF BBS dated 11.11.11. <b>Complied</b>

viii.	Water usage shall be restricted to 30 MCM.	Complied.
ix.	The project proponent shall seriously undertake rain water harvesting measures and shall develop water storage capacity for a larger period not less than 30 days storage before commissioning of the plant. Central Groundwater 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 and open area in the plant premises. Action plan and road map for implementation shall be submitted to the Ministry within six months.	The Rain water harvesting report has already been submitted and approved from CGWA, Ranchi. 13 no Rain water harvesting structures has been constructed in accordance with the approved rain water harvesting plan. Complied
x.	Existing de-generated water bodies (if any) in the study area shall be regenerated at the project proponents expenses in consultation with the state govt.	Degenerated pond has been renovated as per request from local people/Gram Panchayat .
xi.	Hydrogeology of the area shall be reviewed annually from an Institute/ organization of repute to assess impact of surface water and ground regime (especially around ash dyke). In case and deterioration is observed specific mitigation measures shall be undertaken and reports/ data of water quality monitored regularly and maintained shall be submitted to the Regional Office of the Ministry.	The baseline ground water quality of ash pond area is already available with APNRL as part of EIA and ESIA study undertaken. However regular monitoring of ground water in and around ash pond area including heavy metals is being carried out periodically. Monthly monitoring of Water is being undertaken by APNRL in house laboratory. <b>Surface Water Analysis report and Ground water analysis report of upstream &amp; Downstream of Ash pond For the month of May 2019 are enclosed as Annexure III &amp; Annexure IV respectively.</b> Hydrogeology study is under process & Report shall submit to MoEF office on or before 31.03.2020.
xii.	Source of water for meeting the requirement during lean season shall be specified and submitted to the Regional Office of the Ministry within three months.	Lean season data has already submitted to MoEF BBS on 19th aug 2011.Complied
xiii.	No ground water shall be extracted for use in operation of the power plant even in lean season.	Ground water has not extracted for operation of the Power Plant.
xiv.	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.	Natural drainage system has not been disturbed.
xv.	Minimum required environmental flow suggested by the Competent Authority of the State Govt. shall be maintained in the Channel/ Rivers (as applicable) even in lean season.	We are regular in touch with State Government ,if any suggestion will received from State Government , we shall inform to your good office.
xvi.	COC of 5.0 shall be adopted.	COC 5.0 has been considered for cooling tower design.
xvii.	Regular monitoring of ground water level shall be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out	Regular monitoring of ground water in and around ash pond area including heavy metals is being carried out & report submitted to MoEF. Data compared with baseline data. <b>Ground water analysis report of upstream &amp; Downstream of Ash</b>

	particularly for heavy metals (Hg, Cr,As,Pb) and records maintained and submitted to the Regional Office of this Ministry. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.	pond For the month of May 2019 are enclosed as Annexure IV. Installation of Piezometer at prominent locations of plant site has been completed.
xviii.	Monitoring surface water quality in the area 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 Analysis report and Ground water analysis report of upstream & Downstream of Ash pond For the month of May 2019 are enclosed as Annexure III & Annexure IV respectively
xix.	Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved. The leveling in plant area should be minimum with no or minimal disturbance to the natural drainage of the area.	Complied.
xx.	Provision for installation of FGD shall be provided for future use	FGD space is available on site for future use, however concentration of SO <sub>2</sub> in flue gas is well within prescribed limit.
xxi.	The project proponent shall undertake measures and ensure that no fugitive fly ash emissions take place at any point of time.	Effective provision for dust suppression system has been strictly implemented at all dust prone areas such as road, coal stock yard, Truck tippler, Ash pond & others areas. Fugitive emission could not be occurred due to nature of wet condition of bottom ash. However additional arrangement of water sprinkling has been implemented in case of emission occurs. In addition, 03 No Water tankers are deployed for dust suppression.
xxii.	Stacks of 275 m height shall be installed and provided with continuous online monitoring equipments for SO <sub>x</sub> , NO <sub>x</sub> and PM <sub>2.5</sub> & PM <sub>10</sub> . Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack may also monitored on periodic basis.	Twin flue chimney of 275m height has constructed for proper dispersion of flue gases. Online monitoring equipment has installed at chimney. Hg concentration is well within prescribed limits. Complied
xxiii.	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm <sup>3</sup> .	High efficient ESPs of 32 fields have installed to ensure control PM emission in flue gas. Stack Monitoring report from For the month of May 2019 are enclosed as Annexure V.
xxiv.	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.	Necessary mitigation measures in accordance with EMP and EC conditions has taken to control fugitive emissions from ash storage/transfer and coal handling plant such as installation and operation of bag filters collectors, use of water spray systems and enclosed conveyors with well designed, extraction and filtration equipment on transfer points. Complied
xxv.	Utilization of 100% Fly Ash generated shall be made from 4 <sup>th</sup> year of operation. Status of Implementation shall be reported to the Regional Office of the Ministry from time to	Agreements made with cement plants, brick plants, etc to ensure optimum utilization of fly ash. Fly Ash generation & Utilization report (April 2019 to Sep 2019) are enclosed as Annexure VI.

	time.	
xxvi.	Fly ash shall be collected in 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 form. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed off in low lying area.	02 No Silos has Constructed to storage of fly ash. Monitoring of mercury and other heavy metals (As, Hg, Cr, Pd etc.) in the bottom ash and also in the effluents emanating from the ash pond is being done periodically. Bottom ash analysis report & effluent analysis report of ash pond For the month of May 2019 are attached as Annexure VII & Annexure VIII respectively.
xxvii.	Ash pond shall be lined with HDPE/LDPE lining or any other suitable Impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	Complied.
xxviii.	For disposal of Bottom Ash in abandoned mines (If proposed to be undertaken) shall be done after obtaining due permission from DGMS and after ensuring that the bottom and sides of the mined out areas are adequately lined with clay before Bottom Ash is filled up. The project proponent shall inform the State Pollution Control Board well in advance before undertaking the activity	Not Applicable.
xxix.	Sulphur and ash contents in the coal to be used in the project shall not exceed 0.6 % and 34 % respectively at any given time. In case of variation of coal quality at any point of time fresh reference shall be made to MOEF for suitable amendments to environmental clearance condition wherever necessary.	We are purchasing coal from different mines of CCI, a coal India Ltd undertaking wherever coal is available. We are using domestic coal & imported coal having Ash content in range of 5% - 34 %. Concentration of Sulphur is well within the prescribed norms. Complied.
xxx.	Green Belt consisting of 3 tiers of plantations of native species around plant and at least 75 m width shall be raised. The density of tree shall not less than 2500 per ha and survival rate not less than 80 %.	A thick green belt of adequate width is being developed. 67756 nos. (Area covered-30.8 Hac) of plantation has been completed in and outside along the periphery of the power plant to arrest any dust emissions and help in attenuation of noise till Sep 2019. Survival rate of sapling is 87.1%. Total Survived plants are 59015. Plantation done April 19 to September 19 is 2551 samplings. Name of Plant Species- Neem, , Seesam, Mango, Jamun etc.
xxxi.	Over and above the green belt, as carbon sink, social forestry shall be carried out in close consultation with the Forests Department. The project proponent shall accordingly identify blocks of land / degraded forests and shall undertake regeneration of degraded forests at a large scale. In pursuance to this the project proponent shall formulate time bound action plan along with financial allocation and shall submit status of implementation to	Letter has been submitted to Forest Department for guidance on implementation of social forestry.

	the Ministry within six months.	
xxxli.	At least three nearest village shall be adopted and basic amenities like development of roads, drinking water supply, primary health centre, primary school etc shall be developed in co-ordination with the district administration,	<p>APNRL has adopted villages</p> <ul style="list-style-type: none"> <li>a. Baraharharpur</li> <li>b. Padampur</li> <li>c. Srrampur</li> </ul> <p>CSR is also providing the facilities in following villages</p> <ul style="list-style-type: none"> <li>d. Pindrabera</li> <li>e. Chotaharharpur</li> <li>f. Ramjivanpur</li> <li>g. Bikanipur etc.</li> </ul> <p>Details of CSR activity enclosed as Annexure IX.</p>
xxxlii.	The project proponent shall also adequately contribute in the development of the neighboring villages. Special package with implementation schedule for providing potable drinking water supply in the nearby villages and schools shall be undertaken in a time bound manner.	Details of CSR activity enclosed as Annexure IX.
xxxiv.	A time bound implementation of the CSR shall be formulated within six months and submitted to the Ministry. CSR schemes shall be undertaken based on need assessment in and around the villages within 5 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.	List of local employed youth enclosed as Annexure X. Complied
xxxv.	For the tribal families (if any) living in the area within 5.0 Km of site, affected directly or indirectly by the proposed project, specific schemes for upliftment of their sustainable livelihood shall be prepared with time bound implementation and in-built monitoring programme. The status of implementation shall be submitted to the Regional Office of the Ministry from time to time.	Survey has been completed; report has been prepared. CSR activities started for upliftment of sustainable livelihood of tribal families in surrounding villages. Details of CSR activity enclosed as IX .
xxxvi.	An amount of Rs 23.70 Crores shall be earmarked as one time capital cost for CSR programme as committed by the project proponent. Subsequently a recurring expenditure of Rs 4.74 Crores per annum shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within six month along with road map for implementation.	We have submitted Signed copy of capital cost & year wise recurring expenditure on CSR activities to MoEF &CC, Ranchi Office on 05.12.2018. Complied.
xxxvii	It shall be ensured that in-built monitoring mechanism for the schemes identified is in place and annual social audit shall be got	<p>All CSR activities are monitored on weekly and monthly basis.</p> <p>We are in process to conduct social audit through</p>

	done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time	renowned organization who are well aware about Social Audit in Jharkhand region.
<b>B. General Conditions:</b>		
i.	The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. Arrangements shall be made that effluents and storm water do not do not get mixed.	Complied. Treated effluent analysis report of Guard pond from For the month of May 2019 are enclosed as Annexure XI.  Adequate and separate drainage structures has provided to channel storm water generated onsite into rain water harvesting structures constructed in accordance with the approved rain water harvesting plan.
ii.	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation	STP 60 KI capacity (03 No) has installed within plant premises to treat sewage waste. Photographs enclosed as Annexure XII.
iii.	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	The design of coal yard along with provision of fire safety measures viz. fire hydrants, water sprinklers has installed. The details of the same along with plant lay out will be submitted to the Ministry. <b>Complied</b>
iv.	Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.	Approval received on dated 15/12/2011. License No. P/HQ/JH/15/1065 (P257355), valid upto 31.12.2022 for LDO storage installation (under Petroleum Class "C") for operations. Copy of Approval are enclosed as Annexure XIII.  We are using Sulphur content in the liquid fuel within prescribed limit. Copy of Test report are enclosed as Annexure XIII (a).  Emergency Response Plan (ERP) has prepared as part of the project ESMS to cater to potential emergencies/risks identified.
v.	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Plant is in operational condition however A first aid center comprising with necessary medical facilities is made available onsite to provide emergency medical aid to both contract workers and company staff. <b>Complied.</b>
vi.	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 85 dBA from source. For people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors	Adequate measures has implemented in consistent with the EMP to control turbine noise levels within stipulated limits. This include installing of sufficient engineering control in turbines as per design specifications, provision of ear plugs/ear muffs for workers exposed to high noise, rotation of workers and carrying out periodic audiometric testing of workers and records is being maintained, <b>Noise level</b>

	etc. shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non noisy/less noisy areas	monitoring report For the month of May 2019 are enclosed As Annexure XIV.
vii.	Regular monitoring of ambient air ground level concentration of SO <sub>2</sub> , NO <sub>x</sub> , PM <sub>2.5</sub> & PM <sub>10</sub> 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.	In house Monthly monitoring of Air quality is being conduct by NABL accredited Laboratory . Review of air quality monitoring results revealed compliance to NAAQS. Realtime data of CAAQMS has been uploaded at CPCB & JSPCB website. Ambient Air monitoring reports For the month of May 2019 are enclosed As Annexure XV.
viii.	Provision shall be made for the housing of construction labor (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.	Plant is in operational condition and local labors are coming from nearby villages. Complied
ix.	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 clearance letter are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> .	Complied
x.	A copy of the 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.	A copy of EC has been submitted in Gram Panchayat office and copy of Environment Clearance has been uploaded on company website.
xi.	An Environmental Cell comprising of at least one expert in environmental science / engineering, occupational health and social scientist, shall be created at the 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 organization and he shall be held responsible for implementation of environmental regulations and social impact	A Environmental Management Cell consist high qualified environmental professionals are being operational onsite to ensure effective implementation of specific EMPs. Organization chart of Environmental Management Cell enclosed as Annexure XVI.

	improvement/mitigation measures.	
xii.	The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored 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 (PM <sub>2.5</sub> & PM <sub>10</sub> ), SO <sub>2</sub> , NO <sub>x</sub> (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain.	The updated compliance status of the stipulated EC conditions along with monitored data has been uploaded on the company website. The monitoring data (SPM, RSPM, SO <sub>2</sub> , NO <sub>x</sub> ) for both ambient air quality and chimney emissions is being displayed at the main gate of the company. Compliance status of the stipulated EC conditions has been uploaded on company website and hard copy of same has been submitted for the period of Oct 2018 to March 2019 in office of MoEF, Ranchi & CPCB office, Kolkata along with monitored data.
xiii.	The environment statement for each financial year ending 31 <sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.	The last environmental statement for financial year (2018-19) in Form V has submitted to JSPCB vide letter No: APNRL/JSPCB/ES/2018-19/02 dated 20 <sup>th</sup> Sep 2019. Acknowledgement copy of same attached as Annexure XVII.  Environment Statement (2018-19) has been uploaded on company website.
xiv.	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, Its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environment of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests.	Last six monthly reports for the project along with environmental monitoring data submitted to MoEF RO at Ranchi office vide letter No MOE&F,RNC/HYC/RA/22619/02 dated 06 <sup>th</sup> June 2019. Acknowledgement copy of same attached as Annexure XVIII.
xv.	Regional Office of the Ministry of Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and 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. Project proponent will up-load the compliance status in their website and up-date the same from time to time at least six monthly basis. Criteria pollutants levels including NO <sub>x</sub> (from stack & ambient air)	A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information already submitted to the Board. The updated compliance status of the stipulated EC conditions along with monitored data has been uploaded on the company website. The monitoring data (SPM, RSPM, SO <sub>2</sub> , NO <sub>x</sub> ) for both ambient air quality and chimney emissions is being displayed at the main gate of the company.

	shall be displayed at the main gate of the power plant.	
xvi.	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.	Adequate budgetary provision has been made by the APNRL for execution of environmental management plan.
xvii.	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	Complied
xviii.	Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry at Bangalore / CPCB/ SPCB who would be monitoring the compliance of environmental status	We ensure.

कार्यालय :- प्रधान मुख्य वन संरक्षक झारखण्ड, राँची।

पत्रांक-184501(5)29/2028 2574 दिनांक-23/7/09

शुभिव,

वन एवं पर्यावरण विभाग,

झारखण्ड सरकार, राँची।

मैसर्स आधुनिक धर्मल एनर्जी लिमिटेड के कान्फ़ा पवनपुर, श्री रामपुर, रामबन्धपुर  
बीजा, जिला-शरद्वेला-घरसांग में स्थापित किन्हे जाने वाले धर्मल पावर प्रोजेक्ट  
के लिए पर्यावरणीय स्वीकृति के संबंध में।

विभागीय पत्रांक-508, दिनांक-04.02.09

उपरोक्त विषयक संदर्भ में सूचित करना है कि प्रधान मुख्य वन संरक्षक, वन  
विभाग सरकार एवं मुख्य वन्यप्राणी प्रतिपालक, झारखण्ड, राँची ने अपने पत्रांक 483, दिनांक-02.07,  
2008 (अध्यापति संलग्न) द्वारा संबंधित विषय पर प्रतिवेदन/संवेद्य समर्पित किया है। उक्त प्रतिवेदन  
एवं उपलब्ध अभिलेखों के आधार पर प्रस्तावित परियोजना स्थल के संबंध में स्थिति निम्नवत् है :-

1. विषयक धर्मल पावर प्रोजेक्ट कान्फ़ा पवनपुर, श्रीरामपुर, रामबन्धपुर बीजा की रैफ-वन  
भूमि पर स्थापित किन्हे जाने का प्रस्ताव है।
2. उपरोक्त पावर प्रोजेक्ट दलमा वन्यप्राणी आश्रयणी की निकटतम सीमा से लगभग 7.5  
कि०मी० दूर स्थापित होगा। प्रस्तावित क्षेत्र को 10 कि०मी० त्रिभुज के अंदर अवस्थित  
वन भूमि विशिष्ट गज आरक्ष्य का भाग है।
3. वन प्रमण्डल पदाधिकारी, वन्यप्राणी प्रमण्डल, राँची के द्वारा पावर प्रोजेक्ट के लिए  
प्रस्तावित स्थल को प्रस्तावित इको-संवेद्यिज जोन से खटा हुआ बताया गया है, जबकि  
दलमा वन्यप्राणी आश्रयणी के लिए प्रस्तावित इको-संवेद्यिज जोन से संबंधित जो प्रस्ताव  
राज्य सरकार को भेजा गया है उसको अनुसार प्रस्तावित स्थल प्रस्तावित इको-संवेद्यिज  
जोन की निकटतम सीमा से लगभग 2.5 कि०मी० दूर अवस्थित है। इस क्रम में  
अनुलग्नक - 1 पर दो प्रतियों में नक्शा संलग्न है।
4. पावर प्रोजेक्ट के लिए प्रस्तावित स्थल से 8 से 10 कि०मी० की दूरी पर दलमा-रुगाई  
गज-कोरीडोर एवं दलमा-बंडिल गज-कोरीडोर अवस्थित है। इस क्षेत्र के पास एक  
अन्य गज-कोरीडोर चांडिल-नाया कोरीडोर भी है, जो प्रस्तावित स्थल से 10 कि०मी०  
से अधिक दूरी पर अवस्थित है। इनके अतिरिक्त कोई अन्य हाथी कोरीडोर प्रस्तावित

क्षेत्र को पाक पूर्व विहित नहीं है। उपरोक्त राज-कोरीडोर को दिखाते हुए नक्शा (अटलानमा-2) की प्रतियों में संलग्न है।

6. वन प्रमण्डल पदाधिकारी, वन्यप्राणी प्रमण्डल, रांची के द्वारा अपने प्रतिवेदन में यह उल्लेख किया गया है कि वलना वन्यप्राणी आश्रयणी की पश्चिमी सीमा पर स्वयंसेवक नहर की गहराई खोदाई के कारण इस क्षेत्र में हाथियों का आवागमन अतिक्रमणित है। उन्होंने यह भी वर्णित किया है कि आश्रयणी से हाथियों का आवागमन राभगव, एगोएवा-23, डोभी, कपालन, तमोलिया होते हुए पुनः आश्रयणी की ओर हो रहा है। पूर्व में यह पलना जलाशय तक होता था जो वर्तमान में नहर की खोदाई के कारण बाधित है। इस संबंध में नक्शे की समीक्षापरंतु यह पाया गया है कि यदि हाथियों का आवागमन पूर्ववत् आश्रयणी से पलना जलाशय तक होता भी है तब भी प्रस्तावित स्थल ऐसे किर्लॉ आवागमन मार्ग के बीच में नहीं आयेगा। पलना जलाशय की लोकेशन को दर्शाते हुए एक नक्शा भी इस पत्र के साथ संलग्न किया जा रहा है जिससे स्पष्ट होगा कि यह जलाशय प्रस्तावित स्थल से लगभग 17 कि०मी० (वृत्तः पूर्व) की दूरी पर अवस्थित है। प्रस्तावित स्थल होकर हाथियों का आवागमन होने की या कोई पूर्व-स्थापित राज-कोरीडोर होने की कोई भी संभावना/प्रमाण उपलब्ध नहीं है।

6. झारखंड राज्य ने राज-कोरीडोर को विहित करने का कार्य एक स्वयंसेवी संस्था 'राइल्व लाइफ ट्रस्ट ऑफ इण्डिया, नई दिल्ली' के द्वारा किया गया है। इस कार्य में झारखंड वन विभाग के द्वारा भी सहयोग किया गया था। उपरोक्त स्वयंसेवी संस्था द्वारा प्रकाशित 'Right of Passage- Elephant Corridors of India' नामक पुस्तक में झारखंड राज्य के लिए कुल 14 राज-कोरीडोर वर्णित हैं तथा इसी सूचना के अन्तर्गत पर लक्षित क्षेत्र में वर्णित तीन राज-कोरीडोर को नक्शे पर दर्शाया गया है।

7. प्रस्तावित स्थल के आसपास कई अन्य प्रयोग, यथा बाबर ट्रेड कॉरपोरेशन ऑफ इण्डिया लिमिटेड, सीकेटी स्टील आईरॉनऑयरीपल्स, टीसीएल, तथा मार्टिन नीलाचल स्टील आदि स्थित हैं। यह अभ्युत्पन्नक-3 पर दो प्रतियों में उपलब्ध नक्शे से स्पष्ट है। इस क्षेत्र में कई उद्योग होने के कारण भी इससे वलना वन्यप्राणी आश्रयणी को प्रभावित होने-संश्लेषित जोन से बाहर रखा गया था।

8. वन प्रमण्डल पदाधिकारी, वन्यप्राणी प्रमण्डल, रांची ने प्रस्तावित स्थल वलना आश्रयणी एवं elephant bearing area को समीच होने के कारण हाथियों के आवागमन पर पड़ने वाले प्रतिकूल प्रभाव की संभावना बताते हुए प्रस्तावित परियोजना हेतु अनुमति प्रदान-पत्र निर्गत नहीं करने की अनुमति की है। परंतु वन संरक्षक, वन्य प्राणी अंशक, रांची ने वन प्रमण्डल पदाधिकारी द्वारा अपने प्रतिवेदन में उठाए गये विभिन्न बिन्दुओं पर

समीक्षात्मक टिप्पणी अंकित करते हुए उनकी अनुमति से सड़नादि अल्टा नहीं की है; जो उपरोक्त बाँडेबाकों ने उल्लिखित सभ्य एवं संलग्नक पत्रिकाओं पर आधारित है। प्रधान मुख्य वन संरक्षक, जैव विविधता संरक्षण एवं मुख्य वन्यप्राणी प्रतिपालक, झारखण्ड, रांची, वन संरक्षक के उपर्युक्त संदेश से सहमत हैं।

8. प्रधान मुख्य वन संरक्षक, जैव विविधता संरक्षण एवं मुख्य वन्यप्राणी प्रतिपालक, झारखण्ड, रांची द्वारा अल्लिखित शर्त पर संबंधित परियोजना हेतु एन०००३०३०३०३० निर्गत करने की अनुमति की गई है कि EIA के ToR की शर्त V के अंतर्गत में प्रयोज्य अभिकरण को इस शर्त की पठन्यता देनी होगी कि प्रयोज्य अभिकरण वन्य प्राणी दिशेषज्ञ की मदद से Wildlife Mitigation and Conservation Plan बनाए जाएं और दिशेषज्ञ के तैयार कराए गए EIA में शामिल करेंगे और उक्त योजना का कार्यान्वयन वन विभाग के माध्यम से प्रयोज्य अभिकरण की लागत पर किया जाएगा।

प्रधान मुख्य वन संरक्षक, जैव विविधता संरक्षण एवं मुख्य वन्यप्राणी प्रतिपालक, झारखण्ड, रांची के उपर्युक्त संदेश से सहमत/सहमत नहीं सहमत है।

संगुटोप है कि विद्यमान पर्यावरणीय स्थिति पर अग्रतः कार्यवाई करने की कृपा की जाय।

अनु-उपरोक्त।

दिशासनाध्यक्ष,



प्रधान मुख्य वन संरक्षक,  
झारखण्ड, रांची।

2/1/19



# ADHUNIK POWER & NATURAL RESOURCES LTD.

VII-Padampur, PGCILS/S, Kandra - 822402

Phone & Fax : 0657-6628400 6628440

## PURCHASE ORDER

VENDOR CODE : 26627

SSK ENTERPRISE 32 EZRA STREET, TODI CORNER, SOUTH BLOCK ROOM, NO.19, GROUND FLOOR KOLKATA WEST BENGAL PIN - 700001 TEL-33 3985-1405 GSTNO: 19APMPK212781Z1	Purchase Order No. & Date : 330004954 & 06.03.2019 Quotation No. & Date : B-MAIL & 24.01.2019 Other Ref. :
SUPPLIERS CONTACT: MR. ADITYA MUNDEHA 9831431215	PLEASE RETURN TO Contact Person : GENERAL PURCHASE Phone : 0657-6628442 Email : bikashsamanta@adhunikgroup.co.in

FOR SUPPLY OF SYSKA MAKE, 30W SOLAR LED STREET LIGHT.

SL. NO.	MATERIAL DESCRIPTION	UOM	ORDER QTY	UNIT RATE	BASIC AMOUNT	DISC.AMNT/ DISC %	DISCOUNTED VALUE(Rs.)
10	<b>SOLAR LIGHT POWERED BY LI-ION BATTERY</b> Product Code : SSK-5SL-30W, Power Consumption : 30W, Solar Panel Power Consumption : 35W, Size in mm : 1398 X 277 X 154, Lenses : 3000 Lm, Working Temperature : (-25°C to (+) 55°C, Battery Type : Lithium battery, Battery Life Span : 36000mah, Life Efficiency : Above 100 Lenses/Watt, CCT : 6700K, CRI : > 80, Beam Angle : 120 deg - 140 deg, Make of LED: CR28, Lamp Housing : Diecast Aluminium, Lens Material : Toughened Glass, Led Lifespan : Minimum 50000 hrs., Ingress Protection : IP 65, Installation Height : 5-8M, Weight : 3880gms, Solar Charging Time : 4-5 Hrs Bright Sunlight, Lighting Time : Over 18 Hours, Energy Efficiency arrangement : Nature Switch for Auto ON/OFF, Sensor switch for Auto Dimming, Mounting arrangement : Suitable for Bracket and Clamp, Thermal management : External heat sink of Aluminum housing, aluminum metal-core printed circuit board of thermal conductivity more than than 2.0W/mk and thermal pad with thermal conductivity more than 1.5W/mk. TRSN Code : Delivery Date : 31.07.2019 Delivery At : Sarakola-Kharwan, Jhark Invoice No. & Date : 5200035468 18.01.2019 Cost Center : APNRI. ELECTRICAL	PCS	15.000	25,690.00	385,350.00	0.00	385,350.00 (GST-( 5.00%))

Authorised Signatory

Signature

- WORKS : VILL: PADAMPUR, BHEMID POOL, SARAKOLA-KHARWAN, JHARKHAND PIN-822402, PHONE-0657-6628439
- REGD.OFFICE : 14, N. S. Road, 2nd Floor, Kolkata - 700 001, Phone : 22428551, 22428553, Fax : 22428531, 22428553
- CORP.OFFICE : 6th Floor, Lansdowne Towers, 2/1A, Sarat Bose Road, KOLKATA - 700 020, Phone : 033 - 30517100



# ADHUNIK POWER & NATURAL RESOURCES LTD.

VII-Padampur, PGCILS/N, Kandra - 832402  
Phone & Fax : 0657-6828400 6628440

CONTD. PURCHASE ORDER NO.3300004954

31.07.2019	15.000					
<b>Total</b>				385,350.00	0.00	385,350.00
<b>Mode of Transport</b> BY ROAD.	<b>INCO Terms</b>	<b>Freight by</b> IN THE SCOPE OF VENDOR.	<b>IGST</b> SUB-TOTAL			19,267.50
<b>Insu. by</b> IN THE SCOPE OF VENDOR.	<b>S.Tax Form</b> OST EXTRA AS APPLICABLE	<b>To be Delivered at</b> OUR APNRL PADAMPUR SITE.				404,617.50
15.000			<b>Grand Total (Rs.)</b>			404,617.50

**FOUR LAKH FOUR THOUSAND SIX HUNDRED SEVENTEEN AND PAISE FIVE ZERO ONLY (Rs.)**

- \* Please quote PURCHASE ORDER reference in all the correspondence.
- \* Please sign & return the attached copy as a token of Receipt.
- \* Please submit your Bill(s)/ Invoice(s) and Excise Invoice (if any) along with your Delivery Challan.
- \* The Supplier shall comply with provision of the E.H.S. (Environment Health & Safety) related documents, during the supply of the Materials like M.S.D.S (Material Safety Data Sheet) or E.H.S (Environment Health & Safety) guidelines etc.
- \* This is an electronic PO and carries no signature.

**SPECIAL INSTRUCTIONS**

DELIVERY : WITHIN 6-8 WEEKS.

**PAYMENT TERM**

100% WITH TAXES AGAINST PROFORMA INVOICE.

**GARANTEE / WARRANTY**

3 YEARS REPLACEMENT WARRANTY FROM THE DATE OF INVOICE. YOU SHOULD PROVIDE US WARRANTY CERTIFICATE ALONG WITH SUPPLY OF MATERIALS.

**OUR DETAILS**

Range	: ADITYAPUR-IV, SOURADEEP PLAZA, BISTUNUR, JAMSHEDPUR	Regn. No.	: AAFC/A2331/SD002
Range Address	: AAFC/A2331/SD002	ECC No.	: AAFC/A2331/SD002
Division	: JAMSHEDPUR	L.S.T. No.	: 50620905535
C.S.T.No.	: 20620605536-101	VAT / TTN No.	: AAFC/A2331/
Dist. Address	: ADITYAPUR II, BAIDEM BHAWAN, ADITYAPUR, JAMSHEDPUR	Provisional ID No.	: 20AAFC/A2331/112A
Corporate Identity Number	: 040101WB2005PLC102935	GSTARN No.	: AA20H217003246Y
City - Cantonment	: 143, NEW BARADWARI, JAMSHEDPUR, JHARKHAND		

<b>Created by</b> APNRL_BAHSY 06.03.2019	<b>Checked by</b> APNRL_BAHSY 06.03.2019	<b>Checked by</b> APNRL_PROSAN 07.03.2019	<b>Approved by</b> APNRL_CHTRAG 07.03.2019
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**Terms and Condition**

- 1. Address** : Offer's specifically need other wise, all communication(s) in respect of this order shall be made to Adhunik Power & Natural Resources Ltd (Purchase Dept - Tel.No. 657-6628440)
- 2. Meaning of Expression** : The Purchaser in these conditions means "Adhunik Power & Natural Resources Ltd." The Seller includes all persons, firms, corporations and companies, entity etc. who agree to sell to purchaser.
- 3. Quantity Ordered** : In case of strike, shortage of labor, breakdown, accident or other unforeseen contingencies of whatever nature resulting stoppage of production at purchaser's works, the purchaser reserves the right to cancel or modify the order without being liable for any compensation and/or claim of any description. The goods ordered for any reason will be returned to seller with charges for transportation both ways plus labor, re-loading etc. and not to be replaced except upon receipt of written instructions from purchaser.
- 4. Description** : Please refer to item on the Price of the Purchase Order along with detailed description below the item.
- 5. Delivery** : The timely delivery of the materials shall be the essence of the contract and any failure on that score will entitle the buyer to purchase the material from the market at the prevailing market rate at the cost and risk of the seller without any prejudice to the right of the buyer to cancel the order. On request of the purchaser, seller will arrange for necessary insurance of the materials. Any loss, breakage or any damage during transit due to any cause whatsoever shall be borne by the seller.
- 6. Packing Instructions** : All articles should be packed properly to avoid breakage or pilferage of the materials in transit. In addition to the specific advice of the purchaser.

**Authorised Signatory**

<b>WORKS</b>	1. VILL: PADAMPUR, BEHIND PGCIL, SARAKHELA-KHARSWAN, JHARKHAND PIN-832402, PHONE-0657 6628439
<b>REGD.OFFICE</b>	2. 16, N. S. Road, 2nd Floor, Kolkata - 700 001, Phone : 22428551, 22428553, Fax : 22428552, 22428553.
<b>CORP.OFFICE</b>	3. 6th Floor, Lakeshore Towers, 2/A, Sector - Bess Road, KOIKATA - 700 020, Phone : 033 - 30512100

**Signature**



# ADHUNIK POWER & NATURAL RESOURCES LTD.

VII-Padampur, PGCILS/S,Kandru - 832402

Phone & Fax : 0657-6628400 6628440

CONTD.PURCHASE ORDER NO.3300804954

7. **Challan :** The seller must deliver the goods as per the delivery instruction under their challan having material code, pin reference and their own supplier code as given in relevant order and its reference no. No goods will accept without proper challan having these informations.

8. **Inspection :** Inspection of the goods finally will be made by purchaser in their own factory and their report shall be final and binding on both the parties. In case of Forging, Casting etc. If any defect is detected during the machining operations such as forging will be rejected on seller's account. In case inspection at your site, then 10 days advance information to be given to us for arranging our inspectors. Inspected material duly approved by our inspectors may be dispatched along with Adhunik Power & Natural Resources Ltd. inspection certificate or IQR. Inspection report, as the case may be. In case any drawing/sketch is involved in the supply, you should be in for position or position the same to our inspectors at the time of inspection for the verification. In case any specific test report by any institute/laboratory is required, same shall accompany the dispatch documents, failing which the material will be liable for rejection at our end.

9. **Invoicing / Billing :** Invoices to suppliers accompanied with received challan must be sent by the seller to the purchaser. separate invoice should be sent for the work order, order number with prefix letter and date, railway receipt number and date and the stage number should be shown on each invoice when the supplies are made by rail. All invoices must show invoice number/unit and size at which each item or the material is charged to the invoice and freight paid on the transportation. mode of dispatch should be mentioned in the invoice.

10. **Terms of Payment :** Payment will be as usual indicated on serial rate and quantity received and accepted by purchaser's works and their remark will be considered final and decisive in all respects. Payment will be made only after the goods have been received and approved by the purchaser's inspection dept and found satisfactory in terms of quality and other specifications laid down in the order. Payment may be without any reservation of this order to the purchaser's satisfaction. No interest will be paid on the outstanding(s).

11. **Prices :** All the rates quoted in the order are understood to be for purchaser's works unless otherwise expressly agreed. No storage will be allowed for packing or storage unless specified in the order. No retention of the price will be permitted during the period of the contract. If prices are revised in the order, it is agreed that seller's price will be the lower of the prevailing market price.

12. **Penalty :** All rejected materials would be returned to the seller immediately on the rejection at the cost of seller in respect of packing, freight and insurance etc. In the event of the seller's failure to supply the goods in time, the purchaser reserves the right to purchase goods from the market on seller's account and risk and can hold them liable for any difference in price and / or other incidental expenses arising thereon. If the purchaser finds that the material supplied are not of the contracted quality or not according to the specification required or received in damaged or broken condition or otherwise not satisfactory, owing to any reason thereof, the purchaser shall be sole judge and certified to reject the material, cancel the contract and buy its requirement in the open market on seller's risk & cost. Purchaser can recover the loss if any, from the seller reserving always the right to forfeit the deposit (if any) placed by the seller for the due fulfillment of the contract. the seller will make arrangements to remove the returned materials. Otherwise they will be lying entirely at seller's risk and responsibility. Any surcharge, wharfage or similar charges which purchaser have to undergo on account of the seller's failure to book the goods in accordance with the order or due to late delivery of the railway receipts, shall be borne by the seller.

13. **Disputes :** In all cases of dispute(s), the decision of the purchaser shall be final and binding on both the parties.

14. **Other Terms :** The security deposit if any submitted by the seller for the due fulfillment of the contract will be stored interest and will be returned only after the contract has been completed. on the order satisfaction of the company, purchase order will be raised open until full purchase order is supplied and accepted by the purchaser. Disregard of any of the above instruction or conditions will invariably delay the payment of bills.

15. **General :** Please mention clearly order reference in all the correspondence/ challans / invoices etc. Challan must specify supplier code & item wise code and item line no(s) in the purchase order. Separate challan in duplicate copies; each order along with material dispatch advice, material gate pass & other registration no. should be sent with materials, invoices in the name of our works office and will be submitted to replace along with received challan, giving order details to our works office for payment. A copy of the invoice must be forwarded to this purchase office for the information and co-ordination. Materials, if rejected should be collected within seven days from the date of the receipt of the rejection advice, these terms shall also be applicable to special contracts over and above the terms which are agreed in such cases.

16. On receipt of our purchase order at your end, if NO written order acceptance is given to us within 5 working days from the receipt of the Order, we shall deem that the purchase order has been accepted by you.

17. The jurisdiction in respect of this Order and all disputes and differences in relation thereto shall be of Jharkhand.

18. The vendor / contractor shall comply with the statutory / regulatory board / pollution control board(s) of respective states or country relating to handling of hazardous elements.

19. Material procurement is partly evaluated on the basis of energy performance.

20. Hiring design of new modification/improvement on energy performance improvement opportunity is to be considered.

**Delivery :** The Delivery Date mentioned in the last date of Delivery of Goods in case of Purchase Order(s) and start date of Service in case of Service Order(s).

**Payment Terms :** The standard payment terms is 30 days credit. i.e. within 30 days after Delivery & Acceptance of the Materials / Service and submission of Tax Invoice / Bill and/or otherwise specifically mentioned in the clause "PAYMENT TERMS" of the Order.

**Delivery Period Tolerance :** The tolerance is 2 / 4 weeks after which the LD clause may be applicable.

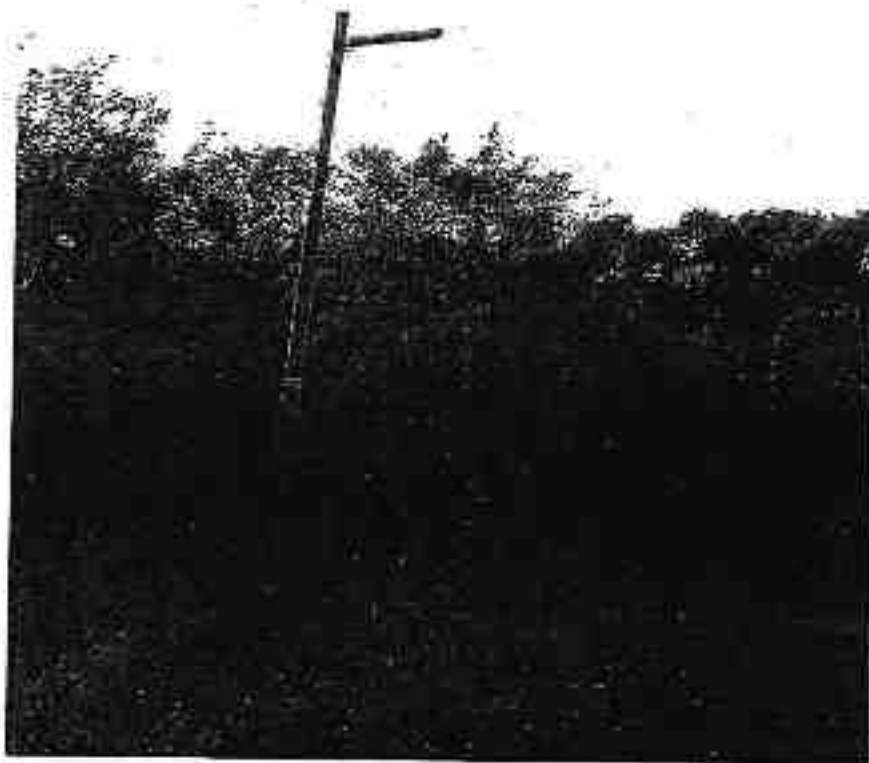
**Liquidated Damage :** The LD shall be charged @ 0.25% per week for the number of weeks of Delay in part or full subject to maximum of 6-3% of Total Order Value, if specifically mentioned in the Order.

Authorised Signatory

Signature

<b>WORKS</b>	+	VILL. PADAMPUR, BEHIND POCIL, SARAIKELA-KHARSWAN, JHARKHAND PIN-832402, PHONE-0657-6628400
<b>REGD.OFFICE</b>	+	14, N. S. Road, 2nd Floor, Kolkata - 700 001, Phone: 22428531, 22428533, Fax: 22428551, 22428553
<b>CORP.OFFICE</b>	+	6th Floor, Landdowns Towers, 2/A, Salt Lake Road, KOLKATA - 700 096, Phone: 033 - 26517100

Solar Light Mounted in Street light Pole





# YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY



LAB ACCREDITED BY

National Accreditation Board for Testing & Calibration Laboratory (NABL), New Delhi  
Jharkhand State Pollution Control Board (JSPCB)

Water Test Report		URL/Unique Lab Report No.	TCT8131910000084P, TC7813194000035F
Issued to : M/S ADHUNIK POWER & NATURAL RESOURCES LIMITED Vill: Padampur, Behind P.G.C.I.L. Substation, Jamshedpur-832105, Jharkhand		Job code - Chemical	YBAEELWA/JC/ Mgy- 19/06
		Job code - Biological	YBAEELWA/JM/ May- 19/04
		Sample Code	190518-SW-E01
		Report ID	YBAEEL/JSRM9-05-18/SW-E01
		Date of Issue	27 <sup>th</sup> June 2019

Sample Particulars		Details of Sampling	
Sample Name/Description	Surface water	Date of sampling	17-05-19
Sample Quantity	2000 ml	Sample Received Date	18-05-19
Sample pkg. Condition	Sealed in Plastic Bottle	Sampling Protocol	YBAEEL/SPI01/00
Test started on	18-05-19	Sample collected by	Mr. Niraj Kumar & Team
Test completed on	25-05-19	Sample Location	Pond Water (Srirampur village)

### Test Result

Sl. No.	Tested Parameter	Unit	Results	Method Name	Permissible Limit (As per IS 2490 Specification)
1.	pH value	-	7.78	IS 3025 (Part-11)	6.5 - 9.0
2.	Total Dissolved Solid	mg/l	580.0	IS 3025 (Part-16)	2100
3.	Temperature*	°C	23.3	IS 3025 (Part 09)	43
4.	Colour	cu	15	IS:3025 (Part-04)	-
5.	Odour*	-	Agreeable	IS:3025 (Part-05)	Agreeable
6.	BOD	mg/l	4.0	IS:3025 (Part-44)	30
7.	COD	mg/l	60.0	IS 3025 (Part-56)	250
8.	Nitrate (as NO <sub>3</sub> )	mg/l	1.3	APHA 4500 NO <sub>3</sub> -B	-
9.	Arsenic (as As)	mg/l	ND (MDL 0.01)	APHA 3114 B	0.2
10.	Calcium (as Ca <sup>2+</sup> )	mg/l	52.5	IS 3025 (Part-40)	75
11.	Magnesium (as Mg <sup>2+</sup> )	mg/l	45.6	IS 3015 (Part-46)	-
12.	Iron (as Fe)	mg/l	0.26	APHA 3111 B	0.3 to no relaxation
13.	Zinc (as Zn)	mg/l	ND (MDL 0.1)	APHA 3111 B	5
14.	Oxygen (dissolved)	mg/l	2.8	IS 3025 (Part 38)	-
15.	Oil & grease	mg/l	6.8	IS 3025 (Part 39)	10
16.	Phenols (C <sub>6</sub> H <sub>5</sub> OH)*	mg/l	ND	IS 3025 (Part 55)	1
17.	Chloride as Cl	mg/l	58.0	IS 3025 (Part 32)	1000
18.	Fluoride as F	mg/l	0.6	APHA-4500 F-C	2
19.	Lead (as Pb)	mg/l	ND (MDL 0.1)	APHA 3111B	0.1-no relaxation
20.	Chromium as Cr	mg/l	ND (MDL 0.01)	APHA 3111B	0.1-no relaxation

Tested by Seema Afrin Lab Analyst	Checked by Sajrang Kumar Authorized Signatory	Issued by Umesh Das Authorized Signatory Technical Manager



Yugantar Bharati Analytical & Environmental Engineering Laboratory





# YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY



LAB ACCREDITED BY

National Accreditation Board for Testing & Calibration Laboratory (NABL), New Delhi  
Jharkhand State Pollution Control Board (JSPCB)

Water Test Report		URL/Unique Lab Report No.	TC78131910000084P, TC78131940000035F
Issued to :- M/s ADHUNIK POWER & NATURAL RESOURCES LIMITED VIII: Padampur, Bahin P.G.C.L. Substation, Jamshedpur-832105, Jharkhand	Job code - Chemical	YBAEEL/WAL/C/ May- 19/06	
	Job code - Biological	YBAEEL/WAL/MI May- 19/04	
	Sample Code	190518-SW-E01	
	Report ID	YBAEEL/JSR/19-05-18/SW-E01	
	Date of issue	27 <sup>th</sup> June 2019	

Sample Particulars		Details of Sampling	
Sample Name/Description	Surface water	Date of sampling	17-05-19
Sample Quantity	2000 ml	Sample Received Date	18-05-19
Sample pkg. Condition	Sealed in Plastic Bottle	Sampling Protocol	YBAEEL/SP/01/00
Test started on	18-05-19	Sample collected by	Mr. Niraj Kumar & Team
Test completed on	25-05-19	Sample Location	Pond Water (Sriempur village)

### Test Result

No.	Parameter	Unit	Result	Method	Remarks
21.	Copper (as Cu)	mg/l	ND (MDL 0.01)	APHA 3111B	-
22.	Conductivity	µS/cm	958.0	IS 3025 (Part 14)	-
23.	Potassium (as K <sup>+</sup> )	mg/l	5.6	APHA 3111 B	-
24.	Sodium (as Na <sup>+</sup> )	mg/l	63.2	APHA 3111 B	-
25.	Sulphate (as SO <sub>4</sub> )	mg/l	182.3	IS 3025 (Part 24)	1000
26.	Selenium (as Se)	mg/l	ND (MDL 0.01)	APHA 3111 B	0.05
27.	Ammonia (Fres)	mg/l	ND (MDL 0.1)	IS 3025 (Part-34)	-
28.	Cyanide (as CN)	mg/l	ND (MDL 0.01)	IS 3025 (Part-27)	-
29.	Mercury (as Hg)	mg/l	ND (MDL 0.01)	APHA 3112 B	0.01
30.	Total Coliform	MPN/100 ml	34	APHA 9221 B	Shall not be present in any 100 ml sample
31.	E. Coli	MPN/100 ml	4.0	APHA 9221 F	Shall not be present in any 100 ml sample

\*\*\*\*\*End of Test\*\*\*\*\*

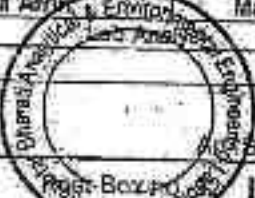
Remarks:- According to tested parameter, the results found within prescribe limit of Surface Water specification IS 2490. Bacterial contamination found.

Note: The Parameters marked with \* are not accredited by NABL.

Specific contractual notes:

- The results listed refer only to the tested sample and applicable parameter.
- This report, in full or in part, shall not be used for advertising or as evidence in any court of law.
- This report cannot be reproduced, except when in full, without the written permission of the Lab in-charge.
- The samples received shall be destroyed after two month from the date of issue of the certificate unless specified otherwise and sample for biological testing will be destroyed within two week of testing.
- The liability of the laboratory is limited to the involved amount.
- All disputes are subjected to the Ranchi Jurisdiction.
- ND - not detected, MDL - minimum detectable limit

<i>Saimat Singh</i>	<i>Madhuri Sinha</i>	<i>Bajrang Kumar</i>	<i>Mukesh Kumar</i>	<i>Umesh Das</i>
Tested by		Checked by		Issued by
Bairam Adhunik & Environ		Bajrang Kumar	Mukesh Kumar	Umesh Das
		Authorized Signatory		Technical Manager
Authorized Signatory		Authorized Signatory		Page 2 of 2
Chemical Section		Microbiological Section		



YUGANTAR BHARATI Analytical & Environmental Engineering Laboratory

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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY



LAB ACCREDITED BY: National Accreditation Board for Testing & Calibration Laboratories (NABL), New Delhi  
Jharkhand State Pollution Control Board (JSPCB)

Water Test Report		URL (Unique Lab Report) No.	TC78131910000086P, TC78131940000036F
<b>Issued to :-</b> M/s ADHUNIK POWER & NATURAL RESOURCES LIMITED Vill: Padampur, Behind P.G.C.I.I. Substation, Jamshehpur-832105, Jharkhandg	Job code - Chemical	YBAEEL/WA/LIC/ May- 19/08	
	Job code - Biological	YBAEEL/WA/LIM/ May- 19/04	
	Sample Code	190518-SW-E02	
	Report ID	YBAEEL/JGR/19-05-18/SW-E02	
	Date of issue	27 <sup>th</sup> June 2019	

Sample Particulars		Details of Sampling	
Sample Name/Description	Surface water	Date of sampling	17-05-19
Sample Quantity	2000 ml	Sample Received Date	18-05-19
Sample pkg. Condition	Sealed in Elastic Bottle	Sampling Protocol	YBAEEL/SPI01/03
Test started on	18-05-19	Sample collected by	Mr. Niraj Kumar & Team
Test completed on	25-05-19	Sample Location	Pond Water (Padampur village)

Test Result					
SL No.	Tested Parameter	Unit	Results	Method Name	Permissible Limit (As per IS 2480 Specification)
1.	pH value	-	7.65	IS 3025 (Part-11)	5.5 - 9.0
2.	Total Dissolved Solid	mg/l	504.0	IS 3025 (Part-16)	2100
3.	Temperature*	°C	28.4	IS 3025 (Part-09)	40
4.	Colour	cu	20	IS:3025 (Part-04)	-
5.	Odour*	-	Agreeable	IS:3025 (Part-05)	Agreeable
6.	BOD	mg/l	4.0	IS:3025 (Part-44)	30
7.	COD	mg/l	40.0	IS 3025 (Part-68)	250
8.	Nitrate (as NO <sub>3</sub> )	mg/l	3.2	APHA-4500 NO <sub>3</sub> -B	-
9.	Arsenic (as As)	mg/l	ND(MDL 0.01)	APHA 3114 B	0.2
10.	Calcium (as Ca <sup>2+</sup> )	mg/l	34.7	IS 3026 (Part-40)	75
11.	Magnesium (as Mg <sup>2+</sup> )	mg/l	21.6	IS 3015 (Part-45)	-
12.	Iron (as Fe)	mg/l	0.23	APHA 3111-B	0.3 to no relaxation
13.	Zinc (as Zn)	mg/l	ND (MDL 0.1)	APHA 3112-B	5
14.	Oxygen (dissolved)	mg/l	2.0	IS 3025 (Part 38)	-
15.	Oil & grease	mg/l	5.2	IS 3025 (Part 39)	10
16.	Phenols [ C <sub>6</sub> H <sub>5</sub> OH]*	mg/l	ND	IS 3025 (Part 55)	1
17.	Chloride as Cl	mg/l	122.9	IS 3025 (Part 32)	1000
18.	Fluoride as F	mg/l	0.4	APHA 4500 F-C	1
19.	Lead (as Pb)	mg/l	ND(MDL 0.01)	APHA 3111B	0.1-no relaxation
20.	Chromium as Cr	mg/l	ND(MDL 0.01)	APHA 3111B	0.1-no relaxation

 Tested by Salma Afrin Lab Analyst	 Checked by Bajrang Kumar Authorized Signatory	 Issued by Umesh Das Authorized Signatory Technical Manager
Yugantar Bharati Analytical & Environmental Engineering Laboratory AN-100, GPC, Jharkhand & DHSAS 18001-204 Environmental Engineering Laboratory		





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ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY



LAB ACCREDITED BY: National Accreditation Board for Testing & Calibration Laboratory (NABL), New Delhi  
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<b>Water Test Report</b>	URL (Unique Lab Report) No.	TC78131910000885P, TC78131940000039F
Issued to : M/s ADHUNIK POWER & NATURAL RESOURCES LIMITED VIII, Padampur, Behind P.G.C.I.L. Substation, Jamshedpur-832105, Jharkhand	Job code - Chemical	YBAEEL/WA/LCI/ May-19/05
	Job code - Biological	YBAEEL/WA/LM/ May-19/04
	Sample Code	190518-S/W-E02
	Report ID	YBAEEL/JSR/19-05-18/SW-E02
	Date of Issue	27 <sup>th</sup> June 2019

Sample Particulars		Details of Sampling	
Sample Name/Description	Surface water	Date of sampling	17-05-19
Sample Quantity	2000 ml	Sample Received Date	18-05-19
Sample pkg. Condition	Sealed in Plastic Bottle	Sampling Protocol	YBAEEL/SP/D1/00
Test started on	18-05-19	Sample collected by	Mr. Niraj Kumar & Team
Test completed on	25-05-19	Sample Location	Pond Water (Padampur village)

### Test Result

Sr. No.	Parameter	Unit	Result	Method	Limit
21.	Copper (as Cu)	mg/l	0.02	APHA 3111B	3
22.	Conductivity	µS/cm	977.0	IS 3025 (Part 14)	-
23.	Potassium as k	mg/l	9.3	APHA 3131 B	-
24.	Sodium (as Na <sup>+</sup> )	mg/l	106.7	APHA 3111 B	-
25.	Sulphate (as SO <sub>4</sub> )	mg/l	14.8	IS 3025 (Part 24)	1000
26.	Selenium (as Se)	mg/l	ND (MDL 0.01)	APHA 3111 B	0.05
27.	Ammonia (Free)	mg/l	ND (MDL 0.1)	IS 3025 (Part-34)	-
28.	Cyanide (as CN <sup>-</sup> )	mg/l	ND (MDL 0.01)	IS 3025 (Part-27)	-
29.	Mercury (as Hg)	mg/l	ND (MDL 0.01)	APHA 3112 B	0.01
30.	Total Coliform	MPN/100 ml	210	APHA 9221 B	Shall not be present in any 100 ml sample
31.	E. Coli	MPN/100 ml	540	APHA 9221 F	Shall not be present in any 100 ml sample

\*\*\*\*\*End of Test\*\*\*\*\*

Remarks:- According to tested parameter, the results found within prescribe limit of Surface Water specification IS 2490. Bacterial contamination found.

Note: - The parameters marked with \* are not accredited by NABL.

Specific contractual notes:-

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- All disputes are subjected to the Hindi Jurisdiction.
- ND - not detected, MDL - minimum detectable limit

<i>Saima Aftin</i>	<i>Madhuri Sinha</i>	<i>Bejrang Kumar</i>	<i>Mukesh Kumar</i>	<i>Umesh Das</i>
Saima Aftin	Madhuri Sinha	Bejrang Kumar	Mukesh Kumar	Umesh Das
Analyst	Analyst	Authorized Signatory	Authorized Signatory	Technical Manager





# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY



LAB ACCREDITED BY: National Accreditation Board for Testing & Calibration Laboratory (NABL), New Delhi  
Jharkhand State Pollution Control Board (JSPCB)

<b>Water Test Report</b>	URL/Unique Lab Report No.	TC78131910000062P, TC78131940000033F
Issued to :- M/s ADHUNIK POWER & NATURAL RESOURCES LIMITED Vill: Padampur, Behind P.G.C.J.L Substation, Jamshedpur-832105, Jharkhand	Job code - Chemical	YBAEEL/WA/L/C/ May- 19/07
	Job code - Biological	YBAEEL/WA/L/I/ May- 19/05
	Sample Code	180518-GW-E01
	Report ID	YBAEEL/JSR/19-05-18/GW-E01
	Date of Issue	27 <sup>th</sup> June 2019

Sample Particulars		Details of Sampling	
Sample Name/Description	Ground water	Date of sampling	17-05-19
Sample Quantity	2000 ml	Sample Received Date	18-05-19
Sample pkg. Condition	Sealed in Plastic Bottle	Sampling Protocol	YBAEEL/SP/01/00
Test started on	18-05-19	Sample collected by	Mr. Niraj Kumar & Team
Test completed on	25-05-19	Sample Location	Bore Well ( Padampur Village)

Test Result					
Sl. No.	Tested Parameter	Unit	Results	Method Name	Permissible Limit (As per IS 10500 Specification)
1.	pH value	-	7.60	IS 3025 (Part-11)	6.5 to 8.5
2.	Total Dissolved Solid	mg/l	318	IS 3025 (Part-16)	500 - 2000
3.	Temperature*	°C	28.7	IS 3025 ( Part 03 )	-
4.	Colour	cu	15	IS:3025 (Part-04)	8.5 to 8.5
5.	Odour*	-	Agreeable	IS:3025 (Part-05)	Agreeable
6.	Alkalinity (as CaCO <sub>3</sub> )	mg/l	164	IS:3025 (Part-23)	200 to 500
7.	Hardness (as CaCO <sub>3</sub> )	mg/l	153.5	IS 3025 (Part-21)	200 to 600
8.	Nitrate (as NO <sub>3</sub> )	mg/l	17.7	APHA 4500 NO <sub>3</sub> - B	45 to no relaxation
9.	Arsenic (as As)	mg/l	ND (DL 0.01)	APHA 3112 B	0.01 to 0.05
10.	Calcium (as Ca <sup>++</sup> )	mg/l	39.6	IS 3025 (Part-40)	75 to 200
11.	Magnesium (as Mg <sup>++</sup> )	mg/l	13.2	IS 3016 (Part-46)	30 - 100
12.	Iron (as Fe)	mg/l	0.23	APHA 3111 B	0.3 to no relaxation
13.	Zinc (as Zn)	mg/l	0.23	APHA 3111 B	5 to 15
14.	Turbidity	NTU	5.0	IS 3025 ( Part 10 )	1-5
15.	Taste*	-	Agreeable	IS 3025 ( Part 07 )	Agreeable
16.	Chlorine Residual	mg/l	ND (DL 0.07)	IS 3026 ( Part 26 )	-
17.	Chloride as Cl	mg/l	125.0	IS 3025 ( Part 32 )	250-1000
18.	Fluoride as F	mg/l	0.4	APHA 4500 FC	1-1.5
19.	Lead as Pb	mg/l	ND (DL 0.01)	APHA 3111B	0.01-no relaxation
20.	Chromium as Cr	mg/l	0.03	APHA 3111B	0.05-no relaxation

 Tested by Saima Afrin Lab Analyst	 Checked by Balraj Kumar Authorized Signatory	 Issued by Umesh Das Authorized Signatory/Technical Manager
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LAB ACCREDITED BY: National Accreditation Board for Testing & Calibration Laboratory (NABL), New Delhi  
Jharkhand State Pollution Control Board (JSPCB)

Water Test Report	URL (Unique Lab Report) No.	TC78131910000082P, TC78131940000033F
<b>Issued to :-</b> <b>M/s ADHUNIK POWER &amp; NATURAL RESOURCES LIMITED</b> Vill: Padampur, Behind P.G.C.I.L. Substation, Jamshedpur-832105, Jharkhand	Job code - Chemical	YBAEEL/WA/UC/ May- 19/07
	Job code - Biological	YBAEEL/WA/LM/ May- 19/05
	Sample Code	190518-GW-E01
	Report ID	YBAEEL/JSR/19-05-18/GW-E01
	Date of Issue	27 <sup>th</sup> June 2019

Sample Particulars		Details of Sampling	
Sample Name/Description	Ground water	Date of sampling	17-05-19
Sample Quantity	2000 ml	Sample Received Date	18-05-19
Sample pkg. Condition	Sealed in Plastic Bottle	Sampling Protocol	YBAEELJSP/01/00
Test started on	18-05-19	Sample collected by	Mr. Niraj Kumar & Team
Test completed on	25-05-19	Sample Location	Bore Well ( Padampur Village)

Sr. No.	Parameter	Unit	Result	Method	Limit
21.	Copper as Cu	mg/l	0.02	APHA 3111B	0.05-1.5
22.	Conductivity	µS/cm	657	IS 3025 ( Part 14 )	-
23.	Potassium as K	mg/l	7.4	APHA 3111 B	-
24.	Sodium as Na	mg/l	82.3	APHA 3111 B	-
25.	Cadmium as Cd	mg/l	ND (DL 0.01)	APHA 3111 B	0.005-no relaxation
26.	Sulphate as SO <sub>4</sub>	mg/l	111.2	IS 3025 ( Part 24 )	200-400
27.	Acidity	mg/l	6.0	IS 3025 (Part-22)	-
28.	Ammonia ( Free ) <sup>*</sup>	mg/l	ND (DL 0.1)	IS 3025 (Part-35)	-
29.	Cyanide ( as CN ) <sup>*</sup>	mg/l	ND (DL 0.01)	IS 3025 (Part-27)	-
30.	Mercury ( as Hg )	mg/l	ND (DL 0.01)	APHA 3112 B	-
31.	Total Coliform	MPN/100 ml	ND (MDL 1.8)	APHA 9221 B	Should not be present in any 100 ml sample
32.	E. Coliform	MPN/100 ml	ND (MDL 1.8)	APHA 9221 F	Should not be present in any 100 ml sample

\*\*\*\*\*End of Test\*\*\*\*\*

**Remarks:** - According to tested parameter, the results found within prescibe limit of Drinking water specification IS 10500.

**Note :-** The parameters marked with \* are not accredited by NABL.

**Specific contractual notes :-**

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- All disputes are subjected to the Ranchi Jurisdiction.
- ND - not detected, MDL - minimum detectable limit.

<i>Saima Afrin</i>	<i>Madhuri Sinha</i>	<i>Bejrang Kumar</i>	<i>Mukesh Kumar</i>	<i>Umesh Das</i>
Tested by		Checked by		Issued by
Saima Afrin	Madhuri Sinha	Bejrang Kumar	Mukesh Kumar	Umesh Das
Authorized Signatory			Authorized Signatory	Technical Manager

Authorized Signatory

Authorized Signatory

Page 2 of 2

Chemical Section

Microbiological Section

Yugantar Bharati Analytical & Environmental Engineering Laboratory

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ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY



LAB. ACCREDITED BY: National Accreditation Board for Testing & Calibration Laboratories (NABL), New Delhi  
Jharkhand State Pollution Control Board (JSPCB)

<b>Water Test Report</b>	URL (Unique Lab Report) No.	TC78131810000083P, TC78131940000034F
Issued to :- M/S ADHUNIK POWER & NATURAL RESOURCES LIMITED Vill: Padampur, Behind P.G.C.I.L. Substation, Jamshedpur-832105, Jharkhand	Job code - Chemical	YBAEELWA/LCJ May-19/07
	Job code - Biological	YBAEELWA/LJM May-19/05
	Sample Code	190518-GW-E02
	Report ID	YBAEELJSR/19-05-18/GW-E02
	Date of Issue	27 <sup>th</sup> June 2019

Sample Particulars		Details of Sampling	
Sample Name/Description	Drinking water	Date of sampling	17-05-19
Sample Quantity	2000 ml	Sample Received Date	18-05-19
Sample pkg. Condition	Sealed in Plastic Bottle	Sampling Protocol	YBAEEL/SP/01/00
Test started on	18-05-19	Sample collected by	Mr. Niraj Kumar & Team
Test completed on	25-05-19	Sample Location	Bore Well ( Pindrabera village )

### Test Result

Sl. No.	Tested Parameter	Unit	Results	Method Name	Permissible Limit (As per IS 10500 Specification)
1.	pH value	-	8.93	IS 3025 (Part-11)	6.5 to 8.5
2.	Total Dissolved Solid	mg/l	236.0	IS:3025 (Part-16)	500 - 2000
3.	Temperature <sup>a</sup>	°C	26.6	IS 3025 ( Part 09 )	-
4.	Colour	cu	20	IS:3025 (Part-04)	6.5 to 8.5
5.	Odour <sup>a</sup>	-	Agreeable	IS:3025 (Part-05)	Agreeable
6.	Alkalinity (as CaCO <sub>3</sub> )	mg/l	138.0	IS:3025 (Part-23)	200 to 600
7.	Hardness (as CaCO <sub>3</sub> )	mg/l	129.3	IS 3025 (Part-21)	200 to 600
8.	Nitrate (as NO <sub>3</sub> )	mg/l	11.2	APHA 4500 NO <sub>3</sub> -B	45 to no relaxation
9.	Arsenic (as As)	mg/l	ND(DL 0.05)	APHA 3112-B	0.01 to 0.05
10.	Calcium (as Ca <sup>+</sup> )	mg/l	40.4	IS 3025 (Part-40)	75 to 200
11.	Magnesium (as Mg <sup>+</sup> )	mg/l	6.8	IS 3015 (Part-48)	30 - 100
12.	Iron (as Fe)	mg/l	0.15	APHA 3111 B	0.3 to no relaxation
13.	Zinc (as Zn)	mg/l	0.17	APHA 3111 B	5 to 15
14.	Turbidity	NTU	5.0	IS 3025 ( Part 10 )	5
15.	Taste <sup>a</sup>	-	Agreeable	IS:3025 ( Part 07 )	Agreeable
16.	Chlorine Residual	mg/l	ND(DL 0.07)	IS 3025 ( Part 25 )	-
17.	Chloride as Cl	mg/l	17.0	IS:3025 (Part-32)	250-1000
18.	Fluoride as F	mg/l	0.4	APHA 4500 FC	1-1.5
19.	Lead as Pb	mg/l	ND(DL 0.01)	APHA 3111B	0.01-no relaxation
20.	Chromium as Cr	mg/l	0.02	APHA 3111B	0.05-no relaxation

<i>Saima Afrin</i>	<i>27/06/19</i>	<i>Umesh Das</i>
Tested by Saima Afrin Lab Analyst	Checked by Bajrang Kumar Authorized Signatory	Issued by Umesh Das Technical Manager
Authorized Signatory		



Chemical Section  
Yugantar Bharati Analytical & Environmental Engineering Laboratory





# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY



LAB ACCREDITED BY:

National Accreditation Board for Testing & Calibration Laboratory (NABL), New Delhi  
Jharkhand State Pollution Control Board (JSPCB)

<b>Water Test Report</b>		URL (Unique Lab Report) No:	TC78131910000883P, TC78131910000034F
Issued to :- M/s ADHUNIK POWER & NATURAL RESOURCES LIMITED Vill: Padampur, Behind P.G.C.I.L. Substation, Jamshedpur-832105, Jharkhand	Job code - Chemical	YBAEEL/WA/LC/ May- 10/07	
	Job code - Biological	YBAEEL/WA/LMI May- 19/05	
	Sample Code	190518-GW-E02	
	Report ID	YBAEELJSR/19-05-19/GW-E02	
	Date of Issue	27 <sup>th</sup> June 2019	

Sample Particulars		Details of Sampling	
Sample Name/Description	Drinking water	Date of sampling	17-05-19
Sample Quantity	2000 ml	Sample Received Date	18-05-19
Sample pkg. Condition	Sealed in Plastic Bottle	Sampling Protocol	YBAEEL/SP/01/00
Test started on	18-05-19	Sample collected by	Mr. Nitaj Kumar & Team
Test completed on	25-05-19	Sample Location	Bora Well ( Pindrabera village )

Sl. No.	Parameter	Unit	Result	Standard	Remarks
21.	Copper as Cu	mg/l	ND (DL 0.01)	APHA 3111B	0.05-1.5
22.	Conductivity	µS/cm	393.0	IS 3025 (Part 14)	-
23.	Potassium as k	mg/l	2.1	APHA 3111 B	-
24.	Sodium as Na	mg/l	23.4	APHA 3111 B	-
25.	Cadmium as Cd	mg/l	ND (DL 0.01)	APHA 3111.B	0.001-no relaxation
26.	Sulphate as SO <sub>4</sub>	mg/l	18.5	IS 3025 (Part 24)	200-400
27.	Acidity	mg/l	12.0	IS 3025 (Part-22)	-
28.	Ammonia ( Free ) *	mg/l	ND (DL 0.1)	IS 3025 (Part-35)	-
29.	Cyanide ( as CN ) *	mg/l	ND (DL 0.01)	IS 3025 (Part-27)	-
30.	Mercury ( as Hg )	mg/l	ND (DL 0.01)	APHA 3112 B	-
31.	Total Coliform	MPN/100 ml	ND (MDL 1.8)	APHA 9221 B	Shall not be present in any 100 ml sample
32.	E. Coliform	MPN/100 ml	ND (MDL 1.8)	APHA 9221 F	Shall not be present in any 100 ml sample

\*\*\*\*\*End of Test\*\*\*\*\*

Remarks:-According to tested parameter, the results found within prescribe limit of Drinking water specification IS 10500.

Note : The Parameter(s) marked with \* are not accredited by NABL.

Specific contractual notes:-

- The result listed refer only to the tested sample and applicable parameter.
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- The liability of the laboratory is limited to the invoiced amount.
- All disputes are subjected to the Ranchi Jurisdiction.
- ND - not detected, MCL - minimum detectable limit.

<i>Saima Afrin</i>	<i>Madhuri</i>	<i>ZSA</i>	<i>Mukesh Kumar</i>	<i>27/6/19</i>
Tested by		Checked by		
Saima Afrin	Madhuri Sinha	Bajrang Kumar	Mukesh Kumar	Issued by Umesh Das
Lab Analyst		Authorized Signatory		Technics Manager



Authorized Signatory

Chemical Section  
Yugantar Bharati Analytical & Environmental Engineering Laboratory

Authorized Signatory

Microbiological Section  
Yugantar Bharati Analytical & Environmental Engineering Laboratory

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## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY



LAB ACCREDITED BY: National Accreditation Board for Testing & Calibration Laboratory (NABL), New Delhi  
Jharkhand State Pollution Control Board (JSPCB)

STACK MONITORING TEST REPORT		URL (Unique Lab Report) No.	TC78131820000300P
Report Release Date	24 <sup>th</sup> June 2019	Job code/ Ref. No.	YBAEEL/WA/LA/May -19/
Report ID	YBAEEL/JSR/18-05-15/Stack/02	Sample Description	Stack Emission
Sampling Date	15 <sup>th</sup> May, 2019	Type of Industry	Power Plant
Name of Industry	M/s – Adhunik Power & Natural Resources Ltd. Vill – Padampur, Behind – PGCIL substation, Jamshedpur-832402, Jharkhand	Sampling Location	Port Hole
		Stack Attached to	ESP
		Ladder/ Platform	Permanent
		Weather Condition	Clear
		Relative Humidity	89%
Customer Ref.	Mr. Kamlesh Jha	Sample drawn by	Own/ Mr. Nitaj Kumar & Team

### General Information

Stack No. if any	-	Boiler -2
Height of Stack from ground	meter	275
Inner Dimension of Stack *	meter	55.39
Height of porthole from ground	meter	90

### Fuel Characteristic Report

Type of Fuel	-	Coal
Fuel Consumption	-	149 ton/hour
Production Capacity	-	270 MW

### Results of Analysis

Stack gas temperature	°C	-	111
Stack gas velocity	m/s	IS 11255 P III :2008	10.38
Volumetric flow rate	Nm <sup>3</sup> /hr	IS 11255 P III :2008	2387171.97
Particulate Matter (PM)	mg/Nm <sup>3</sup>	IS: 11255 (P-1)2009	38.45
Sulphur dioxide (SO <sub>2</sub> )	mg/Nm <sup>3</sup>	IS: 11255 (P-2) 2009	395.84
Oxides of Nitrogen (NO <sub>x</sub> )*	mg/Nm <sup>3</sup>	IS: 11255 (P-7) 2005	188.57
Carbon Monoxide (CO)	%	IS: 13270:1892 RA 2009	0.8
Mercury (Hg)*	mg/Nm <sup>3</sup>	-	0.008

### Emission Rate

Dust	kg/hr	91.79
Sulphure dioxide	kg/hr	948.85
Oxides of nitrogen	kg/hr	450.15

\*\*\*\*\* END of REPORT \*\*\*\*\*

<b>Remarks</b>	All values are observed well within the limit
<b>Specific contractual notes</b>	All values are expressed in as will
	The Parameters marked with * are not accredited by NABL
	The results listed here only is for the tested sample and applicable parameter.
	This report in full or in part, shall not be used for advertising or as evidence in any court of law
	This report cannot be reproduced, except when in full, without the written permission of the Lab in-charge
	The samples collected shall be destroyed after 45 days from the date of issue of the certificate unless specified otherwise
	The liability of the laboratory is limited to the invoiced amount
	All disputes are subjected to the Bench Jurisdiction

 Tested by Mukesh Singh Analyst	 Verified by Amit Kumar Singh Lab Analyst	 Issued by Umesh Das Authorized Signatory Atmospheric Pollution Technical Manager
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ISO 9001:2015 & DHSAS 15001:2007 Certified Engineering Laboratory  
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# Adhunik Power & Natural Resource Limited

FLY ASH GENERATION & UTILIZATION FOR THE PERIOD OF April 2019 TO Sep 2019

Sl. No.	Ash Generation and Utilization						Mode of Ash Utilization		
	Months	Coal Consumed	Ash Contents of Coal (%)	Fly Ash Generation	Fly Ash Utilization	%age Utilization	In Making of Fly Ash Based bricks /Blocks /Tiles etc.	In manufacturing of Portland Pozzolana Cement	Fly Ash In Reclamation of Low Lying Area
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	APRIL	167555	43.01	72072.61	72072.61	100.0%	5688.52	17360.09	49024.00
2	MAY	160104	44.57	71353.54	71353.54	100.0%	6273.66	18383.01	46696.87
3	JUNE	200528	44.37	88976.30	88976.30	100.0%	5031.01	13583.88	70361.42
4	July	187029	45.69	85444.50	85444.50	100.0%	6772.04	21930.11	56742.34
5	August	220525	40.65	89640.11	89640.11	100.0%	4503.59	22585.10	62551.42
6	Sep	196408	44.00	86415.82	86415.82	100.0%	5703.61	31611.60	49100.61



# YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY



LAB ACCREDITED BY

National Accreditation Board for Testing & Calibration Laboratory (NABL), New Delhi  
Jharkhand State Pollution Control Board (JSPCB)

Soil & Sludge Test Report		URL (Unique Lab Report) No.	TC78131930000103P
<b>Issued to :-</b> <b>MisADHUNIK POWER &amp; NATURAL RESOURCES LIMITED</b> <b>VIII: Padampur, Behind P.G.C.I.L. Substation, Jamshedpur-832105,</b> <b>Jharkhandg</b>		Job code - Chemical	YBAEEL/WA/L/S/May-19/01
		Sample Code	190518-6-E02
		Report ID	YBAEEL/JSP/18-05-18/S/E02
		Date of Issue	27 <sup>th</sup> June 2019

Sample Particulars		Details of Sampling	
Sample Name/Description	Bottom Ash	Date of sampling	17-05-19
Sample Quantity	2 kg	Sample Received Date	18-05-19
Sample pkg. Condition	Sealed in plastic bag	Sampling Protocol	YBAEEL/SP/01/00
Test started on	18-05-2019	Sample collected by	Mr. Niraj Kumar & Team
Test completed on	25-08-2019	Sample Location	Bottom ash (hooper)

### Test Result

Sl. No.	Tested Parameter	Method	Unit	Results
1.	Arsenic	APHA 3114 B	ppm	0.07
2.	Mercury	APHA 3112 B	ppm	0.08
3.	Chromium	APHA 3111 B	ppm	0.54
4.	Lead	APHA 3111 B	ppm	1.26
5.	Cadmium	APHA 3111 B	ppm	0.04
6.	Copper	APHA 3111 B	ppm	0.33
7.	Nickel	APHA 3111 B	ppm	0.63
8.	Selenium	APHA 3111 B	ppm	0.01
9.	Zinc	APHA 3111 B	Ppm	1.40
10.	Unburnt carbon *	IS 1350 (Part-2)	%	2.3

\*\*\*\*\*End of Test\*\*\*\*\*

Remarks:- According to tested parameter, the results found as above.

Note :- the Parameter marked with \* are not accredited by NABL.

Specific contractual notes:-

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- All disputes are subjected to the Ranchi Jurisdiction.

Tested by (Saima Afrin)	Verified by (Dajrang Kumar)	Issued by (Umesh Das)
Lab. Analyst	Section in-Charge	Technical Manager



Authorized Signatory  
Pollution & Environment  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

An ISO 9001:2015 & OHSAS 18001:2007 Certified Laboratory

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ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY



LAB ACCREDITED BY

National Accreditation Board for Testing & Calibration Laboratory (NABL), New Delhi  
Jharkhand State Pollution Control Board (JSPCB)

Water Test Report		URL (Unique Lab Report No.)	TC78131930000102P
Issued to : - <b>M/sADHUNIK POWER &amp; NATURAL RESOURCES LIMITED</b> Vill: Padampur, Behind P.G.C.I.L Substation, Jamshedpur-832105, Jharkhand		Job code - Chemical	YBAEEL/WAL/C/May-19/10
		Job code - Biological	N/A
		Sample Code	190518-WW-E03
		Report ID	YBAEEL/JSR/19-05-18/WW-E03
		Date of Issue	27 <sup>th</sup> June 2019

Sample Particulars		Details of Sampling	
Sample Name/Description	Waste Water	Date of sampling	17-05-19
Sample Quantity	2000 ml	Sample Received Date	18-05-19
Sample pkg. Condition	Sealed in Plastic Bottle	Sampling Protocol	YBAEEL/SP/01/00
Test started on	18-05-19	Sample collected by	Mr. Niraj Kumar & Team
Test completed on	25-05-19	Sample Location	Ash Pond

Test Result					
Sr. No.	Tested Parameter	Unit	Results	Method Name	Permissible Limit (IS 2480)
1.	pH value	-	5.70	IS 3025 (Part-11)	5.5-9.0
2.	Temperature*	°C	26.4	IS 3025 ( Part 09 )	40
3.	Total Suspended Solids	mg/l	88	IS 3025 ( Part 17 )	100
4.	Arsenic (as As)	mg/l	ND(DL 0.01)	APHA 3112 B	0.2
5.	Oil & grease	mg/l	4.4	IS 3025 ( Part 39 )	10
6.	Lead as Pb	mg/l	ND( DL 0.01 )	APHA 3111B	0.1
7.	Chromium as Cr	mg/l	ND( DL 0.01 )	APHA 3111B	0.1
8.	Mercury (as Hg)	mg/l	ND ( DL 0.01 )	APHA 3112 B	0.01

\*\*\*\*\*End of Test\*\*\*\*\*

Remarks:-According to tested parameter, the results found within prescribe limit of Waste Water specification.

Note :- The parameters are marked with \* are not accredited by NABL.

Specific contractual notes :-

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- All disputes are subjected to the Ranchi Jurisdiction.
- ND - not detected, DL - detectable limit.

<i>Salma Afrin</i>	<i>B. K.</i> 27/06/19	<i>Umesh Das</i> 27/06/19
Tested by Salma Afrin Lab Analyst	Checked by Bajrang Kumar Authorized Signatory	Issued by Umesh Das Authorized Signatory/Technical Manager



Yugantar Bharati Analytical & Environmental Engineering Laboratory

Page 1 of 1



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# ADHUNIK POWER & NATURAL RESOURCES LTD.

(Formerly Adhunik Thermal Energy Limited)

## Report on

### Corporate Social Responsibility Initiatives

(VIII. - Padampur, Block-Gamharia, District-Saraikela-Kharsawan, Jharkhand)

Report: April 2019-Sept. 2019

Corporate Social Responsibility (CSR) is a Company's commitment to its stakeholders to conduct business in an economically, socially and environmentally sustainable manner that is transparent and ethical. CSR Dept. of Adhunik Power make decisions based not only on financial factors, but also considering the social and environmental consequences. As a Corporate Citizen receiving various benefits out of society, it is our co-extensive responsibility to pay back in return to the society in terms of helping needy people by providing health, education, skill development etc., keeping the environment clean and safe for the society by adhering to the best industrial practices and adopting best technologies, and so on. It is the Company's intent to make a positive contribution to the society in which the Company operates.

Adhunik Power & Natural Resource Limited (APNRL), Padampur, in partnership with Rapcha Gram Panchayat, Kandra Gram Panchayat & Dugdha Gram Panchayat had taken up community development projects as a part of corporate social responsibility and executed the development projects in partnership approach. The focus areas of development projects were Health, Education, Women Empowerment, Sports, Culture and Infrastructure Development. The community development initiatives were implemented in the villages of Srirampur, Pindrabera, Bahariharapur, Chotahariharapur, Padampur, Aikanpur, Ghutbera, Ramjivanpur, Nandidih, Barkatand, Dhatkidih, Rapcha, Ramchandrapur, of Dugdha, Kandra & Rapcha Gram-Panchayats during the period. (Villagers with the repetitive chance for the same person to benefit from the various activities as mentioned below):

#### Health & Sanitation:

1. Ambulance Services Available (24x7): 24 X 7 ambulance facility has been providing to the villagers of peripheral village for higher treatment.

No. of Villagers availed free ambulance facility, month wise-

Month	Male	Female	Total No.	Village Covered
April 19	9	17	26	Bahariharapur, Dhatkidih, Rapcha, Srirampur, Dumra, Padampur, Kandra, Gamharia, Amdih, Pindrabera
May 19	17	11	28	
June 19	9	14	23	
July 19	11	22	33	
Aug 19	18	12	30	
Sept 19	22	12	34	





## ADHUNIK POWER & NATURAL RESOURCES LTD.

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2. **Medical Facilities:** Provide free medical treatment at Dispensary, APNRL, Padampur. Following villagers availed the facilities during the period.



Month	Male	Female	Total No.	Villages Covered
April 19	24	18	42	Balidih, Badaharharpur, Srirampur, Dhatkidih, Padampur, Pindrabera, Kandra, Gamharla, Virbhawajpur
May 19	42	38	80	
June 19	33	19	52	
July 19	80	60	140	
Aug 19	66	44	110	
Sept 19	81	46	127	

3. **Health Check-up Camp:** An Active Case Finding Camp including General Health Check-up was



organized on 6.8.2019 in the premises of Occupational Health Center of Adhunik power & Natural Resources Limited, Padampur. District TB Officer, Saraikela-Kharsawan Dr. J. Majhi was present during the camp with the team of Gamharla - Community Health Center (CHC). In the camp total 46 people villagers and employees examined. General Medicines were also distributed among the patients based on the requirement. The objective of the camp was to make the Company employees & villagers aware of preventive and curative measures of common diseases such as cold, cough Skin related, abdominal, malaria etc. and providing specially tuberculosis treatment. Mr. Diwakar Sharma, State Coordinator- Jharkhand, Tuberculosis Call to Action, Ranchi; Dr. J. Majhi, DTO, Saraikela-Kharwan, Dr. Manoj Kumar Medical Officer, Gamharla Mr. Sujat Saran- Pharmacist and other officials were also participated in the camp.



4. **National Nutritional Week 2019:** Under the social responsibilities, the CSR Department, APNRL, Padampur organized the seminar on "Nutrition and Health Education", healthy babies show, Munhajuthi and Godh Bhaer function at Community Hall, Padampur village on 6<sup>th</sup> Sept 2019 which covered 4 villages. Approximately 150 women including pregnant and lactating women from 4 villages namely Padampur, Bikanipur, Dhutbara & Balidih were participated in the programme.



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The main objective is to raise awareness on the importance of nutrition for health which has an impact on development, productivity, economic growth and ultimately National development.



Godh bharal function organized for pregnant women; it is performed during pregnancy to pray for the good health of the mother and baby, and the safe delivery. A group of women came together to bless the mom-to-be and the baby and feast on some delicious treats. The godh bharal function is generally performed during the seventh month of pregnancy or third trimester and is only attended by women.

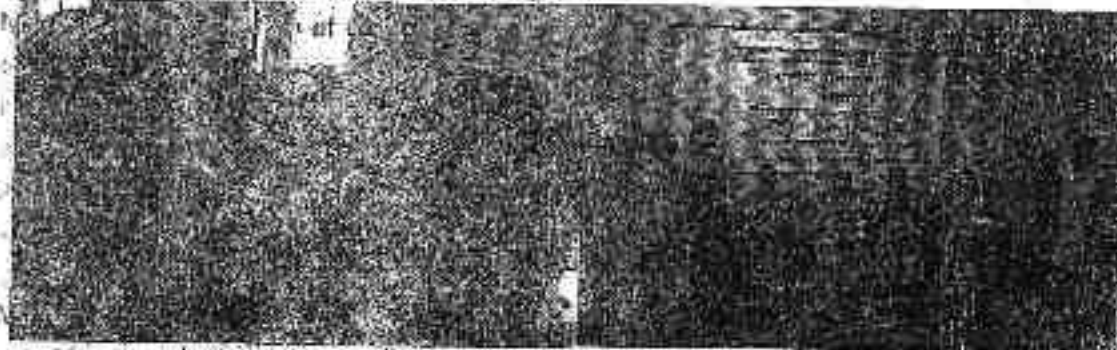
Munhajuthi (Initiation of complementary feeding) function also organized with the objective to encourage parents to be attentive towards regular Nutrition, nutrition of infant, about 20 children taken semi solid food. It was to create awareness among mothers on post-natal care and recognize them for their sincerity towards uparing the kid in scientific and carefullness.



Malnutrition is directly related to human resources development, productivity and ultimately to the national growth. It is because of unbalanced diet and lack of knowledge, our area is also suffering from this problem said by president of Manjla Mandal. She explained feeding habits as follows-

- Early Initiation of breast feeding within 1 hour of birth.
- Exclusive breastfeeding for 6 months age of infants.
- Continue breastfeeding during illness.
- Introduction of nutritionly adequate and safe complementary (semi solid) foods after 6 months together with continued breastfeeding up to 2 years of age or beyond.

Vote of thanks given by Swarnat Baskery, Padampur



5. Drinking Water Supply: Drinking water was supplied through water tanker towards meeting the need of drinking water and other related work, use during social functions. The objectives of supply of drinking water to the villagers were as follows:

- To meet the drinking need of villagers



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ii. To meet the needs of water related other use(s) during water scarcity situation in villages.

The detailed status of drinking water supply is as below:

Month	No. of Tankers / Motor Vehicle / Supply Services	Purpose
Apr '19	09	Meeting the need of drinking water for the villagers during family function etc.
May '19	15	
July '19	18	
July '19	02	
Aug '19	01	
Sept '19	00	

## EDUCATION

1. **Project CYBER VILLAGE:** in order to make the village youths/students of Baraharipur & Rapcha and nearby areas computer literate under the Project CYBER VILLAGE, a tripartite of Adhunik Power & Natural Resources Limited (APNR), Padampur Dugdha & Rapcha Gram Panchayat and New Nisman Sanstha, Jamshedpur. The objectives of this Project CYBER VILLAGE were as under:

- To make 1200 village youths/students of Rapcha & Dugdha Gram Panchayats computer literate for their pursuit of better career in future.
- To make villagers aware of the importance of information revolution through internet.



The detailed status of the students in Computer Literacy Centre wise was as under:

S. No.	Name of the Center/Place	Center wise Enrollment Status of Village Youths			Total
		Male	Female	Total	
1	Baraharipur	15	7	22	with Screen Operator level second / Baraharipur Dugdha and Rapcha

**Project CYBER VILLAGE** - project to make use of  
**Bus facilities:** Bus facility has been provided to girls students of peripheral village for their education in Jamshedpur.

About 40 village girls student are availing the bus facilities, Jamshedpur. The objectives of the Project CYBER VILLAGE were as under:





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**Hindi essay writing competition:** The topic of Hindi essay writing completion is Water conservation

(जल संरक्षण) - importance and solution for class VI to VII and Sanitation for class IV to V. An essay

writing competition was organized on 24.6.2019, 25.6.2019

and 8.7.2019 respectively from 9:30 to 10:30 AM in the

school premises at

Badahariharpur,

Padampur and

Pindrabera. All

students of class IV, V,

VI, VII & VIII were participated. The essay was judged on the

basis of the student's vocabulary, presentation and creativity.

The purpose of the competition was to encourage the

students to enhance their thinking and writing skills. The essays were well written by the students.



2. **Report on Debate competition** Skill development among the local children is the prime objective of our CSR programme. To implement this objective we had organized debate/ essay writing competitions from 3.9.2019 to 6.9.2019 in four schools namely Badahariharpur Padampur, Srirampur and Rapcha after those 3 best students are selected and awarded respective school.

Debate competition organized for class fifth and above. Panel

of 3 member's team from 2-school teacher and Lady Supervisor-ICDS, Gamharla decided the winner

for Debate competition. Panelists very impressed and they had very long discussion before coming

to the final results.

Best 3 candidates selected in each school for prize. Prizes were awarded by School Principal in

respective School, Lady Supervisor-ICDS, Gamharla and Sr.

Manager CSR, APNRL.

Mr. Sanjeet Kr. Sinha congratulate to each of the

participants for their participation as well as their effort.

He assured them that time to time CSR department is

going to organize this kind of competition to improve the

skill as well as develop their positive thinking regarding our

society.

At the end of the Competition School Principal appreciated the CSR team for the active participation

and their efforts at village level.





## ADHUNIK POWER & NATURAL RESOURCES LTD.

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Vote of thanks given by School Principal.



### WOMEN EMPOWERMENT & LIVELIHOOD

1. **Self Help Group (SHG) Meeting** :- Monthly meetings of SHG held every month in follows villages - Srirampur, Padampur, Badaharharpur, Pindrabera, Rapcha, Chotaharharpur. SHG members participated in regular basis and discussed regarding repayment of loan, trading, business and other issues.

The objectives of Self Help group meeting were as under:

- i) To explore the functional aspects of SHGs in promoting micro saving and inter-lending activities.
- ii) To increase social cohesiveness among the members of women Self-Help-Group.



**Murli and spice production at Pindrabera:** 25 – members of Jahir Ayo Mahila Samiti Self-help group of Rapcha engaged in Murli packaging and selling (trading) and spice production. This has helped them in increasing corpus fund for their group. They have made this activity as their livelihood.

**Agarabatti production:** 14 – members of Jagriti Mahila Samiti of Srirampur village initiated in Agarabatti making, packaging and selling. This has helped them in increasing corpus fund for their group. They have made this activity as their livelihood.



**Phenyl production:** 14 – members of Mansa Devi Self Help Group of Srirampur village initiated in Phenyl production and selling. This has helped them in increasing corpus fund for their group. They have made this activity as their livelihood.

**World Environment Day' 2019 "Beat Air Pollution":** World Environment Day (also called as WED) has been started celebrating as an annual event on every 5th of June in order to raise the



## ADHUNIK POWER & NATURAL RESOURCES LTD.

(Formerly Adhunik Thermal Energy Limited)

global awareness about the importance of the healthy and green environment in the human lives, to solve the environmental issues by implementing some positive environmental actions as well as to make aware common public worldwide that everyone is responsible for saving his environment and not only somebody, government or organizations working for it.

APNRL observed the World Environment Day (WED) on 5.6.2019 at plant premises. The World Environment Day celebrated by creating awareness about importance of environment and

plantation  
of Saplings  
by  
company  
officials.

The  
programme  
was  
initiated  
through the



plantation of tree by Plant Head inside the premises of the company. Rally was flag on by Mr. B.N Nellikwar –Plant Head and about 100 employees were moving form plant premises to Kandra Bus Stand and loudly says all the slogs which are written in placards. Security and supervisory employee take-care the cycle riding people because It was a busy road.

### Objective:

- To make aware the common public about the environmental issues.
- Encourage common people from different society and communities to become an active agent in developing environmental safety measures.
- Encourage people to make their nearby surroundings safe and clean to enjoy safer, cleaner and more prosperous future.
- Let them know that community people are very essential to inhibit negative changes towards the environmental issues.
- Developing new drainage systems for conserve water recourse.

### Other:

**Voter's Awareness Program:** The Election Commission of India has taken initiatives for electoral literacy and voter's awareness across the country through different institute and business organizations to strengthen the democratic system of the country and making the election process more participative and meaningful to ensure enhanced voters' participation.



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An Awareness program organized on 1.4.2019 among contract workers and employees at Campus



of Adhunik Power, Padampur. About 150 workers including employees were present. They have ensured them to participate in coming election.

On 5.4.2019 CSR Team organized a voter's awareness program at Primary School Campus, Srirampur. Mr. Sanjeet Kumar Sinha motivated them to exercise their universal adult franchise in the forthcoming Lok Sabha elections to ensure the selection of right candidate. He appealed to women to have better participation ratio than their male counterparts in this election. 70 women from Shrirampur Chota Hariharpur, Bada Hariharpur, Virbhawajour and Padampur villages participated in this program.

An awareness program organized on 20.4.2019 at the football ground, Badahariharpur in the presence of Lady Supervisor-ICSD. Following persons were also actively involved AWWs, Anil Sardar Sanjeet Kumar Sinha CSR-APNRL and villagers of Badahariharpur, Srirampur, Chota Hariharpur. Lady Supervisor-ICDS, Gamharia lauded the efforts of the Adhunik Group and appealed to the villagers to vote. Approx. 175 Women including youths from the vicinity villages like Badaharharpur, Padampur & Srirampur participated in this program.





## ADHUNIK POWER & NATURAL RESOURCES LTD. (Formerly Adhunik Thermal Energy Limited)



Display poster in different villages



### Repairing of Overhead tank

Adhunik Power & Natural Resources Limited, Padampur is playing a vital role in improving the socio-economics conditions of local communities around which the



company is operative.

On 16<sup>th</sup> of July 2019, a meeting was convened by villagers of

Badaharharpur along with School teachers of Govt. Middle school, Badaharharpur with the CSR team. During the meeting, the status of developmental projects being executed under Adhunik's CSR was discussed where the villagers requested for company interventions towards repairing of



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overhead tank which is in non-functional last few year. The villagers told that the school children are also facing water problem. The overhead water system needs to be repaired immediately for which the school teacher had submitted the request letter to CSR dept. on 24.6.2019,

CSR team paid a visit to the site along with the school teacher & electrician, we found that the condition of the overhead pump was installed near school which is still nonfunctional due to non-availability of starter and electric wiring up to switch point, It will be required mainly a 1.5 HP starter, wiring and MCB with box to enable children and villagers to get water from overhead. On 9.7.2019 the company provided the starter, wire and MCB including labour and electrician. Now, the overhead system has been repaired and functioning, villagers and children are very happy for this work.

**Distribution & Spray Bleaching Powder at village level:** Rainy season is going on and most of the diarrhoea cases found at village levels in these seasons only. We know that main cause of diarrhoea is



polluted water. Every year several diarrhoea cases found at village level.

Based on the saturation of villages we have distributed and sprayed bleaching powder in canal, well and water logging area from 21.8.2019 to 29.8.2019 at Padampur (Mahadevpuram), Badaharipur & Bikanipur with the support of Village volunteers and Villagers under the Project of Swachhh Gram Swasth Gram to stop mosquito breeding to prevent various Diseases caused by the dirt & mosquitos etc.

Following villagers were also actively involved Kall Charan Sardar, Anil Sardar, Kall pada Sardar etc.

**Repairing of Village Road:** Adhunik Power & Natural Resources Limited, Padampur is playing an important role in improving the socio-economics conditions of local communities around which the



company is operative.



## ADHUNIK POWER & NATURAL RESOURCES LTD.

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In this background, a meeting was convened by villagers of Bikanipur with the CSR team. During the meeting, the status of developmental projects being executed under Adhunik's CSR was discussed where the villagers requested for company interventions towards repairing of Virchwajpur - Bikanipur village road which is in pitiable condition. The villagers told that the condition of village road is so bad that an accident may occur any time due to the ditches it has i.e. there is a high risk of accident. The road needs to be repaired immediately for which the villagers had submitted the request letter to CSR dept. on 22.6.2019.

CSR team paid a visit to the site along with the villagers and found that the condition of the road is damaged severely. On 27.6.2019 the company provided the Slag with JCB to fill up the ditches and



repaired the village road. Now, the road has been repaired about 300 meters and villagers are very happy for this work.

**Repairing of Village Road:** A meeting was held on 22.8.2019 with villagers of Bikanipur. During the meeting the villagers requested us to repair the village road from Birdhrajpur to Bikanipur near Saraikela main road. Now road repaired by internal resources of the company on 28.8.2019 and villagers are very happy for this work.



**Repairing of Village Road:** A meeting was held with villagers of Badaharipur. During the meeting the villagers requested us to repair the village road, Badaharipur. Now road repaired by internal resources of the company on 30.9.2019 and villagers are very happy for this work.

**State Level Workshop on TB** - A state level consultative meeting cum workshop with industries and mining companies organized in collaboration of Jharkhand CSR Council and Department of Health, Medical Education & Family Welfare, Govt. of Jharkhand on 02.05.2019 at Ranchi.











# ADHUNIK POWER & NATURAL RESOURCES LTD.

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More than 33 Industries from Jharkhand came under one roof for ELM (Employer Led Model) on Tuberculosis and this has happened first time in our country that such a large number of companies came together to discuss about TB elimination. Adhunik Power is a first company of Jharkhand signed Letter of Intent (LOI) on 26-12-2018 with District Tuberculosis Cell, Saraikela-Kharsawan for mutual cooperation in fight against TB. All the 33 Industries are also ready to contribute in END TB goal. Let's make our country TB free.

**District Level Meeting on Govt. Program:** A meeting was held at Conference hall, DC office chaired by Deputy Commissioner, Saraikela - Kharsawan on 30.9.2019 where representatives of companies, Govt. officials and constructors were participated. Mr. Rakesh Kumar Sinha, Labour Superintendent, Saraikela explained the govt. scheme/ program like Pradhan Mantri Shram Maaandhan Yojana, Unorganized Workers Insurance Scheme, Funeral Assistance Scheme, Chief minister Scholarship Yojana for Children of Unorganized Workers, Medical Assistance Scheme, Pension Yojana, Family pension Yojana, Orphan Pension, Marriage Assistance Yojana and also Procedure for enrollment of unorganized workers. After that he requested us to enroll maximum number of Unorganized Workers.

News clippings of the various newspapers.

ANENUE MAIL-6.4.2019	NEWSPAT-6.4.2019	PRABHAT KHABAR-6.4.2019
<p><b>Adhunik launches voter awareness campaign</b></p>  <p>The company has launched a voter awareness campaign in the form of a road show. The road show is being organized by the company to educate the voters about the importance of voting and the rights of the voters. The road show is being organized in the form of a road show. The road show is being organized in the form of a road show.</p>	 <p>Adhunik Power &amp; Natural Resources Ltd. has launched a voter awareness campaign in the form of a road show. The road show is being organized by the company to educate the voters about the importance of voting and the rights of the voters. The road show is being organized in the form of a road show.</p>	<p><b>Adhunik launches voter awareness campaign</b></p>  <p>Adhunik Power &amp; Natural Resources Ltd. has launched a voter awareness campaign in the form of a road show. The road show is being organized by the company to educate the voters about the importance of voting and the rights of the voters. The road show is being organized in the form of a road show.</p>
CHAMKTA AINA-6.4.2019	HINDUSTAN-6.4.2019	UDITVANI-6.4.2019
 <p>Adhunik Power &amp; Natural Resources Ltd. has launched a voter awareness campaign in the form of a road show. The road show is being organized by the company to educate the voters about the importance of voting and the rights of the voters. The road show is being organized in the form of a road show.</p>	<p><b>Adhunik launches voter awareness campaign</b></p>  <p>Adhunik Power &amp; Natural Resources Ltd. has launched a voter awareness campaign in the form of a road show. The road show is being organized by the company to educate the voters about the importance of voting and the rights of the voters. The road show is being organized in the form of a road show.</p>	 <p>Adhunik Power &amp; Natural Resources Ltd. has launched a voter awareness campaign in the form of a road show. The road show is being organized by the company to educate the voters about the importance of voting and the rights of the voters. The road show is being organized in the form of a road show.</p>

## ADHUNIK POWER & NATURAL RESOURCES LTD, PADAMPUR

Sl.No.	Emp. Code	Name of Employee	Designation	Department	Location
1	302223	Mr. Arun Mahato	Helper	Electrical	Padampur Site
2	302236	Mr. Rajen Kumar Tudu	Technician	WTP, Utilities	Padampur Site
3	302237	Mr. Bangal Majhi	Technician	Horticulture	Padampur Site
4	302384	Mr. Lal Mohan Mahato	Asst. Supervisor	Civil	Padampur Site
5	302386	Mr. Budhram Baskey	Technician	Operation	Padampur Site
6	302387	Mr. Ajit Mahato	Technician	Operation	Padampur Site
7	302393	Mr. Bijay Baskey	Technician	Civil	Padampur Site
8	302430	Mr. Laxman Baskey	Driver	Medical Services	Padampur Site
9	302436	Mr. Raja Ram Majhi	Technician	Automobile	Padampur Site
10	302453	Ms. Paneshwari Kumari	Semi-Skilled	Horticulture	Padampur Site
11	302454	Mr. Sunil Baskey	Semi-Skilled	Coal Logistics	Padampur Site
12	302456	Mr. Nuna Baskey	Helper	Civil	Padampur Site
13	302462	Mr. Rajesh Kumar Mahato	Fitter	Civil	Padampur Site
14	302463	Mrs. Sonia Baskey	Semi-Skilled	CSR	Padampur Site
15	302493	Mrs. Surajmani Baskey	Semi-Skilled	EMD	Padampur Site
16	302494	Mrs. Saraswati Devi	Semi-Skilled	Medical Services	Padampur Site
17	302495	Mrs. Anita Mahato	Assistant	Maintenance	Padampur Site
18	302501	Mrs. Bangl Baskey	Semi-Skilled	AHP	Padampur Site
19	302503	Mr. Raju Tudu	Technician	Electrical	Padampur Site
20	302506	Mr. Ruhi Ram Majhi	Welder	Maintenance	Padampur Site
21	302507	Mr. Dillip Mahato	Helper	WTP, Utilities	Padampur Site
22	302508	Mr. Dulal Mahato	Helper	Fire	Padampur Site
23	302509	Mr. Raju Mahato	Helper	WTP, Utilities	Padampur Site
24	302510	Mr. Santosh Mardl	Electrician	Electrical	Padampur Site
25	302515	Mr. Ajay Kumar Mahato	Technician	Electrical	Padampur Site
26	302516	Mr. Rajesh Mahato	Technician	Electrical	Padampur Site
27	302517	Mr. Mohan Lal Mahato	Technician	Electrical	Padampur Site
28	302518	Mr. Sumit Kumar Mahato	Technician	Electrical	Padampur Site
29	302519	Mr. Tapan Kumar Mahato	Technician	Electrical	Padampur Site
30	302520	Mr. Bibhishan Mahato	Technician	Automobile	Padampur Site
31	302521	Mr. Suku Murmu	Technician	Automobile	Padampur Site
32	302522	Mr. Bimal Kumar Mandal	Technician	Operation	Padampur Site
33	302523	Mr. Bablu Besra	Technician	Operation	Padampur Site
34	302524	Mr. Vikram Baskey	Technician	Maintenance	Padampur Site
35	302525	Mr. Mangal Besra	Technician	Operation	Padampur Site
36	302526	Mr. Bir Singh Hembrom	Technician	Maintenance	Padampur Site
37	302527	Mr. Gopal Hembrom	Technician	Operation	Padampur Site
38	302528	Ms. Chhatamuni Baskey	Helper	Stores	Padampur Site
39	302529	Mr. Durga Hembrom	Technician	Operation	Padampur Site
40	302530	Mr. Suren Baskey	Technician	Operation	Padampur Site
41	302531	Mr. Dasmath Hembrom	Technician	Operation	Padampur Site
42	302532	Mr. Budheswar Baskey	Technician	Operation	Padampur Site
43	302533	Mr. Karan Hembrom	Technician	Operation	Padampur Site
44	302534	Mr. Umesh Tudu	Technician	Operation	Padampur Site
45	302540	Mr. Birendranath Baskey	Driver	Medical Services	Padampur Site
46	302541	Mr. Shailendra Tudu	Driver	Medical Services	Padampur Site
47	302550	Mr. Birdhan Baskey	Technician	Automobile	Padampur Site
48	302574	Mr. Anil Sardar	Technician	Civil	Padampur Site
49	302602	Mrs. Sarla Majhi	Assistant	Admin.	Padampur Site
50	302603	Mrs. Sunita Devi	Assistant	CSR	Padampur Site
51	302604	Mr. Sohan Kisku	Technician	Electrical	Padampur Site
52	302605	Mr. Dillip Kisku	Technician	Electrical	Padampur Site

53	302606	Mr. Rabindra Nath Majhi	Technician	Operation	Padampur Site
54	302607	Mr. Mokra Murmu	Technician	Electrical	Padampur Site
55	302608	Mr. Lakhiram Tudu	Technician	Maintenance	Padampur Site
56	302609	Mr. Durga Baskey	Technician	Maintenance	Padampur Site
57	302610	Mr. Jiten Hansda	Technician	Operation	Padampur Site
58	302611	Mr. Jiten Sardar	Technician	Operation	Padampur Site
59	302612	Mr. Ashok Kumar Mahato	Technician	Operation	Padampur Site
60	302613	Mr. Mangal Majhi	Technician	Electrical	Padampur Site
61	302614	Mr. Sagram Tudu	Technician	Electrical	Padampur Site
62	302615	Mr. Sunil Kumar Tudu	Technician	Operation	Padampur Site
63	302616	Mr. Ganesh Mahato	Technician	Electrical	Padampur Site
64	302617	Mr. Sachin Kumar Tudu	Technician	Operation	Padampur Site
65	302618	Mr. Alok Mahato	Technician	Electrical	Padampur Site
66	302619	Mr. Rakesh Kumar Mahato	Technician	Operation	Padampur Site
67	302620	Mr. Chhotray Majhi	Technician	Operation	Padampur Site
68	302621	Mr. Devi Lal Majhi	Semi Skilled	Civil	Padampur Site
69	302622	Mr. Govind Majhi	Technician	Electrical	Padampur Site
70	302628	Mr. Kalipada Singh Sardar	On the Job Trainee	CHP	Padampur Site
71	302644	Mr. Vikram Singh Sardar	Semi-Skilled	Intake Well	Padampur Site
72	302645	Mr. Manik Singh Sardar	Technician	Intake Well	Padampur Site
73	302646	Mr. Jagannath Singh Sardar	Semi-Skilled	Intake Well	Padampur Site
74	302647	Mr. Budheshwar Mahato	Semi-Skilled	Intake Well	Padampur Site
75	302659	Mr. Krishna Manjhi	Un-Skilled	CHP Lab	Padampur Site
76	302660	Mr. Sakla Hembrom	Un-Skilled	Maintenance	Padampur Site
77	302661	Mr. Utam Kumar Mahato	Technician	Maintenance	Padampur Site
78	302662	Mr. Shikar Hembrom	Technician	C&I	Padampur Site
79	302663	Mr. Ranjit Besra	Un-Skilled	CHP Lab	Padampur Site
80	302664	Mr. Hopna Baskey	Helper	Operation	Padampur Site
81	302665	Mr. Sona Ram Baskey	Helper	Operation	Padampur Site
82	302666	Mr. Suku Majhi	Un-Skilled	AHP	Padampur Site
83	302667	Mr. Gopal Majhi	Helper	Operation	Padampur Site
84	302668	Mr. Ramdas Kisku	Helper	Operation	Padampur Site
85	302669	Mr. Som Murmu	Technician	Operation	Padampur Site
86	302670	Mr. Khilrod Chandra Mahato	Technician	Operation	Padampur Site
87	302671	Mr. Sona Ram Hembrom	Technician	C&I	Padampur Site
88	302672	Mr. Ram Hembrom	Un-Skilled	CHP Lab	Padampur Site
89	302673	Mr. Rajesh Mahato	Technician	C&I	Padampur Site
90	302674	Mr. Nimay Mahato	Un-Skilled	DM Plant	Padampur Site
91	302676	Mr. Paeton Baskey	Un-Skilled	Maintenance	Padampur Site
92	302677	Mr. Raju Baskey	Un-Skilled	CHP Lab	Padampur Site
93	302678	Mr. Bablu Baskey	Un-Skilled	CHP Lab	Padampur Site
94	302679	Mr. Baijnath Mardif	Technician	Planning & Monitoring	Padampur Site
95	302680	Mr. Nitai Sardar	Technician	Planning & Monitoring	Padampur Site
96	302681	Mr. Baliram Murmu	Technician	Planning & Monitoring	Padampur Site
97	302682	Mr. Karu Tilka Majhi	Technician	C&I	Padampur Site
98	302683	Mr. Rajendra Hembrom	Un-Skilled	Maintenance	Padampur Site
99	302684	Mr. Jitu Hembrom	Un-Skilled	CHP Lab	Padampur Site
100	302687	Mr. Soken Tudu	Technician	C&I	Padampur Site
101	302688	Mr. Umesh Baskey	Un-Skilled	AHP	Padampur Site
102	302690	Mr. Anil Tudu	Un-Skilled	CHP Lab	Padampur Site
103	302694	Mr. Akash Tudu	Un-Skilled	Stores	Padampur Site
104	302695	Mr. Sushil Kumar Tudu	Un-Skilled	CHP Lab	Padampur Site
105	302696	Mr. Mahendra Tantubai	Technician	Electrical	Padampur Site
106	302697	Mr. Prakash Tudu	Un-Skilled	Stores	Padampur Site
107	302698	Mr. Karu Besra	Technician	C&I	Padampur Site
108	302699	Mr. Bangal Tudu	Un-Skilled	CHP Lab	Padampur Site

109	302700	Mr. Ravindra Nath Tudu	Technician	Electrical	Padampur Site
110	302701	Mr. Som Majhi	Un-Skilled	CHP Lab	Padampur Site
111	302702	Mr. Salku Tudu	Un-Skilled	AHP	Padampur Site
112	302707	Mr. Sukram Tudu	Un-Skilled	CHP Lab	Padampur Site
113	302708	Mr. Jeevan Manjhi	Un-Skilled	CHP Lab	Padampur Site
114	302709	Mr. Birsa Hansda	Technician	Operation	Padampur Site
115	302710	Mr. Surja Hansda	Un-Skilled	CHP Lab	Padampur Site
116	302711	Mr. Sanjay Mandal	Technician	C&I	Padampur Site
117	302712	Mr. Budhadev Mahato	Technician	C&I	Padampur Site
118	302713	Mr. Narayan Mahato	Technician	Operation	Padampur Site
119	302714	Mr. Jai Chand Mahato	Technician	Maintenance	Padampur Site
120	302715	Mr. Mithun Majhi	Technician	C&I	Padampur Site
121	302716	Mr. Sumit Kumar Mahato	Technician	WTP, Utilities	Padampur Site
122	302717	Mr. Mantu Mahato	Un-Skilled	CHP Lab	Padampur Site
123	302718	Mr. Santosh Sardar	Un-Skilled	CHP Lab	Padampur Site
124	302719	Mr. Ranjit Singh Sardar	Un-Skilled	CHP Lab	Padampur Site
125	302720	Mr. Lal Mohan Mahato	Un-Skilled	CHP Lab	Padampur Site
126	302721	Mr. Sohan Sardar	Un-Skilled	CHP Lab	Padampur Site
127	302722	Mr. Paga Sardar	Un-Skilled	Maintenance	Padampur Site
128	302773	Mr. Shibanath Singh Sardar	On the Job Trainee	Civil	Padampur Site
129	302774	Ms. Basanti Singh Sardar	On the Job Trainee	Electrical	Padampur Site
130	302775	Mr. Kali Pado Sardar	On the Job Trainee	Civil	Padampur Site
131	300009	Mr. June Baskey	Asst. Supervisor	Civi	Padampur Site
132	300010	Mr. Mangal Manzi	Asst. Supervisor	Civil	Padampur Site



# YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY



LAB ACCREDITED BY:

National Accreditation Board for Testing & Calibration Laboratories (NABL), New Delhi  
Jharkhand State Pollution Control Board (JSPCB)

Waste Water Test Report		URL/Unique Lab Report No.	TC78131830000101P
Issued to :- <b>M/sADHUNIK POWER &amp; NATURAL RESOURCES LIMITED</b> Vill: Padampur, Behind P.G.C.I.L Substation, Jamshedpur-832105, Jharkhandy		Job code - Chemical	YBAEEL/WA/LIC/ May- 19/08
		Job code - Biological	N/A
		Sample Code	190518-WW-E01
		Report ID	YBAEEL/JSR/19-05-18/WW-E01
		Date of Issue	27 <sup>th</sup> June 2019

Sample Particulars		Details of Sampling	
Sample Name/Description	Waste Water	Date of sampling	17-05-19
Sample Quantity	Two Litre (2000ml)	Sample Received Date	18-05-19
Sample pkg. Condition	Sealed in Plastic Bottle	Sampling Protocol	YBAEEL/SP/01/00
Test started on	18-05-2019	Sample collected by	Mr.Nbraj Kumar & Team
Test completed on	23-05-19	Sample Location	ETP Outlet

### Test Result

Sl. No.	Tested Parameter	Unit	Results	Method Name	Permissible Limit (As per IS 2490 Specification)
1.	pH value	--	7.47	IS 3025 (Part-11)	5.5-9.0
2.	Temperature*	--	28.4	IS 3026 (Part-09)	40
3.	Total Suspended Solids	mg/l	36.0	IS 3025 (Part-17)	100
4.	Chloride ( as CL <sup>-</sup> )	mg/l	14.0	IS 3025 (Part-32)	1000
5.	Sulphate ( as SO <sub>4</sub> <sup>2-</sup> )	mg/l	10.8	IS 3025 (Part-24)	1000
6.	Oil & grease	mg/l	5.2	IS 3025 (Part-39)	10
7.	BOD	mg/l	2.8	IS 3025 (Part-44)	30
8.	COD	mg/l	32.0	IS 3025 (Part-56)	250
9.	Phosphate ( as PO <sub>4</sub> <sup>3-</sup> )	mg/l	0.02	IS 3025 (Part-31)	-
10.	Copper ( as cu )	mg/l	0.03	APHA 3111 B	1
11.	Iron ( as fe )	mg/l	0.44	APHA 3111 B	0.3 to no relaxation
12.	Zinc ( as Zn )	mg/l	ND (MDL 0.1)	APHA 3111 B	5

\*\*\*\*\*End of Test\*\*\*\*\*

Remarks:-According to tested parameter, the results found within prescribe limit of Waste Water specification IS 2490.

Note :- The parameters marked with \* are not accredited by NABL.

#### Specific contractual notes:-

- The results listed refer only to the tested sample and applicable parameter.
- This report, in full or in part, shall not be used for advertising or as evidence in any court of law.
- This report cannot be reproduced, except when in full, without the written permission of the Lab In-charge.
- The samples received shall be destroyed after two month from the date of issue of the certificate unless specified otherwise and sample for biological testing will be destroyed after one two week of testing.
- The liability of the laboratory is limited to the invoiced amount.
- All disputes are subjected to the Ranchi Jurisdiction.
- ND - not detected, MDL - minimum detectable limit

<i>Salma Afrin</i>	<i>Kumar</i> 27/06/19	<i>Umesh Das</i> 27/6/19
Tested by Salma Afrin Lab Analyst	Checked by Bajrang Kumar Authorized Signatory	Issued by Umesh Das Technical Manager
	Authorized Signatory Pollution & Environment	Authorized Signatory Pollution & Environment

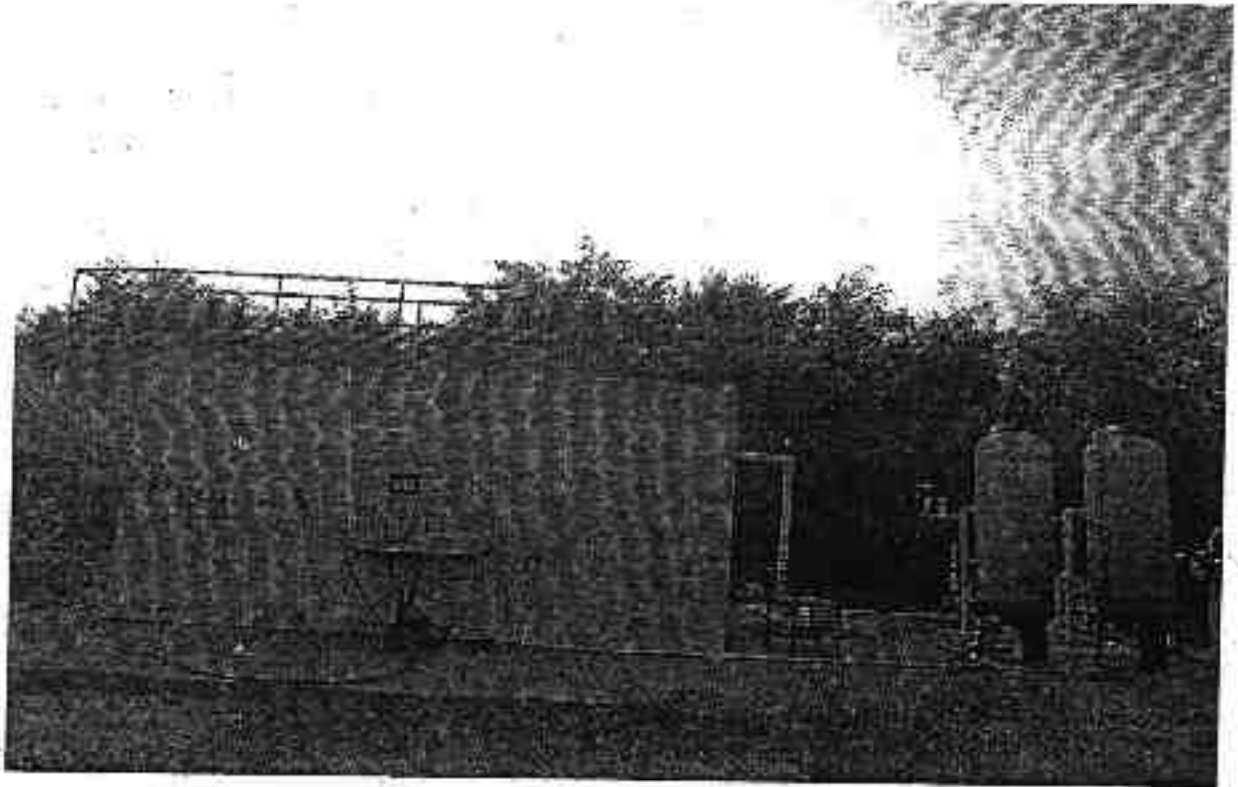
Page 1 of 1



ISO 9001:2015 & OHSAS 18001:2007  
 Post Box no. 32 | Jharkhand Post Office | Sidouli | Ranchi - 834010 (Jharkhand)  
 Ph. 098351-97860, 9304955304 | Tele Fax : 0861-2260787 | E-mail : ybaeel@gmail.com



## Sewage Treatment Plant





पृष्ठ सं. 2

अनुमति संख्या(License No.) PHDQJ1931026 (12/07/16)

**अनुमति के प्रत्येक नए विवरण के लिए स्थान**  
**SPACE FOR ENDORSEMENT OF RENEWALS**

<p>पेट्रोलियम अधिनियम, 1934 के उपखण्डों या इनके अधीन बनाए गए विवरणों के इस अनुमति के शर्तों के अंतर्भूत होने की दशा में यह अनुमति इसमें विना किसी छूट के इस तर्क पर अमान्य की जा सकती है।                      This license shall be rendered null and void in case of non-compliance with the provisions of the Petroleum Act, 1934 or of the rules framed thereunder or of any of the conditions of this license.</p>	<p>अनुमति की तारीख Date of Renewal</p>	<p>अनुमति की शर्तों Date of Expiry of license</p>	<p>अनुमति अधिकारी के हस्ताक्षर और पता Signature and other stamp of the Licensing authority</p>
11		27/12/2013	SA- PESD ADMIN
20	20/08/2013	21/02/2014	SA- R.F. Singh J. Chief Controller of Explosives For Dy. Chief Controller of Explosives Ranchi
21	18/02/2018	21/12/2022	 K. Thakur Singh Dy. Chief Controller of Explosives Ranchi

रान मुख्या विस्फोटक विभाग, रांची  
 Dy. Chief Controller of Explosives, Ranchi

यदि अनुमति शर्तों के अंतर्गत प्रत्येक विवरण और शर्तों के अंतर्गत नहीं पाए जाते हैं और ऐसा निर्धारित नहीं करने के कारण यह अनुमति रद्द की जा सकती है।  
 If the license is found to be cancelled if the licensed premises are not found complying to the conditions given on the approved plan attached hereto and contained in any of the rules and regulations under which this license is granted and the holder of this license is also punishable for the first offence with a fine or imprisonment which may be extended to one month, or with both which may extend to one thousand rupees or with both and for every subsequent offence with a fine or imprisonment which may extend to three months, or with both which may extend to five hundred rupees or with both.

# HINDUSTAN PETROLEUM CORPORATION LIMITED

## QUALITY CONTROL LABORATORY

Bakeria New Building  
CONVENT ROAD, DELHANABAT ROAD, BEHIND AIRPORT,  
MADRAS 600 034

### TEST REPORT

Product: HP INDUSTRIAL DIESEL OIL

Customer / Supplier : **ROST-BONDED TANKS-888**  
 Branch Point :  
 Name of Sample : **TEST**  
 Date : **24/07/79**  
 Qty of Sample : **1000 ml (200 ml x 5) in 200 ml**  
 Delivery Type of Sample :  
 Date / Month / Year : **RECEIVED THRU DELIVERED P/L**  
 Receipt/Dispatch Mode :  
 Sample Taken by : **RAMAKRISHNA**

Test Report No. : **HP700888**  
 Date of Sample Taken : **20/07/79**  
 Name of Sample Received : **TEST**  
 Date of Sample Testing : **22/07/79**  
 Date of Report : **22/07/79**  
 Date of Receipt : **22/07/79**  
 DC Sample Number : **888218**  
 Batch No. :

Test No. Number	Description	Units	Test Method	Specifications		Result Value
				Min	Max	
1	DENSITY @ 15°C	kg/m <sup>3</sup>	IS 1491 Part 1			870
2	ANTIKNOCK INDEX @ 50°C	AKI	IS 1492 Part 1	25.00	32.00	28.00
3	FLASH POINT - PMCC	°C	IS 1493 Part 1	60		75
4	WATER PRESENT	g/ml	IS 1494 Part 1		200	100
5	TOTAL SULFUR	g/gm	IS 1495 Part 1		1.00	0.50
6	FOUR CARBON SULFUR	g/gm	IS 1496 Part 1		2.00	1.00

Remarks:

Sample No. HP700888 is analyzed for the above mentioned parameters in the above mentioned

Reference: IS 1491-1978

- Notes:
- 1) The report is given only when results are available.
  - 2) The test results shall not be reproduced except in the original form without the signature of the Lab. Incharge.
  - 3) The test results shall not be used in any legal proceedings or for other purposes without the prior written consent of Laboratory.
  - 4) The test results are valid at the time of testing.
  - 5) The test results are not valid if the sample is not received in the original form.

Tested by: **RAMAKRISHNA**  
 VELAMURI DATTA SREYA

Reviewed and Approved By: **RAMAKRISHNA**  
 VELAMURI DATTA SREYA

QUALITY CONTROL TEST REPORT

Page No. 1/1



# YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY



LAB ACCREDITED BY: National Accreditation Board for Testing & Calibration Laboratory (NABL), New Delhi  
Jharkhand State Pollution Control Board (JSPCB)

Noise Monitoring Report		URL/Unique Lab Report No.	TC78131923000297F
Report Release Date	24 <sup>th</sup> June 2018	Job code / Ref. No.	YBAEEL/WALJA/May -18/
Report ID	YBAEELJSR/19-05-18/Noise/01	Sample Description	Ambient Noise
Sampling Date	15 <sup>th</sup> to 17 <sup>th</sup> May, 2018	Type of Industry	Power Plant
Sampling duration	24hrs.	Work Order No./ Date	3030003921 / 20.11.2018
Name of Industry M/s - Adhunik Power & Natural Resources Ltd. VIII - Padampur, Behind PGCIL Substation, Jamshedpur-832402, Jharkhand		Sampling Locations	N1 Main Gate Area
			N2 Occupational Health Centre
			N3 Sati Steel (CHP Area)
			N4 Pindrabara Gate
		Weather Condition	Clear
	Relative Humidity	66%	
	Average Temperature	28°C	
Customer Rep.	Mr. Kamlesh Jha	Monitored by	Mr. Niraj Kumar & Team

Locations	Method	Leq in dB (Day Time)	Leq in dB (Night Time)	(Norms) CPCB
N 1 Main Gate Area	IS : 15575.1. 2005	60.2	50.6	Industrial Area Day 75 dB Night 70 dB
N 2 Occupational Health Centre		51.2	48.0	
N 3 Sati Steel (CHP Area)		47.8	46.0	
N 4 Pindrabara Gate		56.1	47.4	

\*\*\*\*\* End of Report \*\*\*\*\*

CPCB Standard		Day Time	Night time
A	Industrial Area	75.0	70.0
B	Commercial Area	65.0	55.0
C	Residential Area	55.0	45.0
D	Silence Zone	50.0	40.0

Remarks	All values are observed well within the limit		
Specific contractual notes	Day Time - from 6:00 AM to 10:00 PM, Night Time - from 10:00 PM to 6:00 AM The results refer only to the tested sample and applicable parameter. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the Lab in charge. The samples collected shall be destroyed after 45 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the State's Jurisdiction.		
Tested by Niraj Kumar Analyst	Issued by Umash Das Technical Manager	Authorized Signatory Atmospheric Pollution Yugantar Bharati Analytical & Environmental Engineering Laboratory	



Post Box No. 82, Narayan Post Office - Sidraul - Ranchi - 834010 (Jharkhand)  
Ph. 098351-97960, 9314553300 | Tele Fax : 0651-2266787 | E-mail : ybaeel@gmail.com





# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY



LAB ACCREDITED BY:

National Accreditation Board for Testing & Calibration Laboratories (NABL), New Delhi  
Jharkhand State Pollution Control Board (JSPCB)

Ambient Air Quality Report		URL (Unique Lab Report) No.	TC78131920000296P
Report/Release Date	24 <sup>th</sup> June 2019	Job code/Ref. no.	YBAEEL/WALJA/May-19/
Report ID	YBAEELJSR/19-06-1/NAAC/01	Sample Description	Ambient Air Quality - Core zone
Sampling Date	19 <sup>th</sup> to 18 <sup>th</sup> May, 19	Type of Industry	Power Plant
Sampling duration	24 hrs.	Work Order No./ Date	3930003821 / 29.11.2018
Name of Industry <b>M/s - Adhunik Power &amp; Natural Resources Ltd. VIII - Padampur, Behind PGOIL substation, Jamshedpur-832402, Jharkhand</b>	Sampling Locations	AAQ - A	ADM Building
		AAQ - B	Switch Yard
		AAQ - C	CHP Area
	Weather Condition	Clear	
	Relative Humidity	65%	
Customer Ref.	Mr. Kamlesh Jha	Average Temperature	35°C
		Sample drawn by	Mr. Niraj Kumar & Team

Parameters	Method	Sampling Location			Units	NAQS (2009)
		Site A	Site B	Site C		
Particulate Matter (PM10)	IS 5182 (Part 2)	71.26	75.67	94.26	µg/m <sup>3</sup>	100 µg/m <sup>3</sup>
Fine Particulate Matter (PM2.5)	US EPA-40 CFR (P-50) (50.7)	53.33	49.55	56.67	µg/m <sup>3</sup>	60 µg/m <sup>3</sup>
Sulphur Dioxide (SO <sub>2</sub> )	IS 5182 (Part 2)	16.23	16.39	17.84	µg/m <sup>3</sup>	80 µg/m <sup>3</sup>
Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 (Part 2)	38.16	39.2	38.39	µg/m <sup>3</sup>	80 µg/m <sup>3</sup>
Carbon Monoxide (CO)	IS 5182 (Part 1)	1.7	2.3	1.8	mg/m <sup>3</sup>	4 mg/m <sup>3</sup>
Ozone (O <sub>3</sub> )	CPCB guideline	15.93	42.98	38.23	µg/m <sup>3</sup>	100 µg/m <sup>3</sup>
Amonia (NH <sub>3</sub> )	IS 5182 (Part 2) 2004	23.11	12.38	30.11	µg/m <sup>3</sup>	400 µg/m <sup>3</sup>
Lead (Pb)	IS 5182 (P-21) 2004	0.089	0.158	0.19	µg/m <sup>3</sup>	1.0 µg/m <sup>3</sup>
Benzene (C <sub>6</sub> H <sub>6</sub> )	IS 5182 (P-21)	0.51	0.79	0.82	µg/m <sup>3</sup>	5 µg/m <sup>3</sup>
Benzo(a)Pyrene (BaP)	IS 5182 (P-11)	ND	ND	ND	ng/m <sup>3</sup>	1 ng/m <sup>3</sup>
Arsenic (As)	CPCB guideline	ND	ND	ND	ng/m <sup>3</sup>	6 ng/m <sup>3</sup>
Nickel (Ni)	IS 5182 (P-23) 2004	1.5	1.6	1.6	ng/m <sup>3</sup>	20 ng/m <sup>3</sup>

\*\*\*\*\* End of Report \*\*\*\*\*

Remarks Specific contractual notes	All values are observed well within the limit.
	All values are expressed in µg/m <sup>3</sup> .
	The parameters marked with * are not accredited by NABL.
	The results listed refer only to the tested sample and applicable parameter.
	This report, in full or in part, shall not be used for advertising or as evidence in any court of law.
	This report cannot be reproduced, except when in full, without the written permission of the Lab in charge.
	The samples collected shall be destroyed after 45 days from the date of issue of the certificate unless specified otherwise.
The liability of the laboratory is limited to the amount involved.	
All disputes are subjected to the Ranchi Jurisdiction.	
Tested by <i>Mukesh Singh</i> Mukesh Singh Analyst	Issued by <i>Unmesh Das</i> Unmesh Das Technical Manager



Authorized Signatory  
Atmospheric Pollution  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Post Box no. 1, Jharkhand Post Office [ Sidroul ] Ranchi - 834030 (Jharkhand)  
Ph. 098351-97960, 9304955304 | Tele Fax : 0651-2260787 | E-mail : ybaeel@gmail.com





Adhunik  
GROUP OF INDUSTRIES

## ADHUNIK POWER & NATURAL RESOURCES LIMITED

WORKS: Village - Padampur, Sahib P.G. J.L. Substation,  
Adiyapur - Kendra Road, Sarakala - Kharawan PIN - 832402 Jharkhand  
Phone : +91 - 657 - 6628400, Fax : +91 - 657 - 6628440  
DIN - B40101W32035PL0102355

APNRL/HR/Office Order/10  
5<sup>th</sup> August 2015

### Office Order

As per the directions of the Ministry of Environment & Forest, Government of India while granting the Environment Clearance vide letter no J-13011/4/2009-IA.II(JT), dated 29th Aug 2009 (Units) & Letter No. J13012/8/2009-IA.II (P) dtd 9th May 2011 to our 2x270 MW Power Plant, the Management, considering the importance of Environmental concerns and set up the Environment Cell under the chair of Plant Incharge who is directly reporting the Managing Director of Organisation. The Cell is functional since 2009 and is equipped with qualified professionals of the fields.

### Roles & Responsibility of Environment Cell

Following the broad scope of the Cell

- Understanding Environment Issues in Adhunik power & Natural Resources Ltd. during Construction & Operation and Maintenance Phase.
- Framing appropriate scope of work for requisite environment management, EIA & various other complex issues to address those with tailor made solutions.
- Awarding the consultancy tasks for environmental management & EIAs, Modelling, Monitoring etc. & other complex studies to the appropriate agency and also sometimes in-house work of Monitoring.
- Dealing with JBRC/CPCB/MBCP & CC for various aspects including obtaining clearances for Plant and Plant related development and policy making at State and National level.
- The meeting of the management of M/s APNRL shall be conducted in which the budgetary allocation for the EMP shall be discussed and finalized and comprehensive EMP shall be prepared as per the guidelines of CPCB.
- Preparation of Environmental Management Plans- Basically Assisting Engineering Section for preparation Master Plan for existing plant to address policy regulations issued by MOCF&CC from time to time.
- Operating and upgrading the existing Hazardous Waste Management Facilities for Plant Area as per latest regulations. (Development and Operation of TSDF at APNRL).
- Initiating dialog, meeting & developing participatory approach with the key stakeholders for solving any typical pollution related problems.
- Review of EMP for various sections of plant and suggest modifications if any for better Env Management.
- Representing APNRL at the State and National level platform for Environment Management.
- Comments & advice on draft amendment, notifications on Environmental Laws.
- Imparting knowledge and raising awareness for Environment Protections among APNRL key officers and other related stakeholders.
- The Plant Incharge will be responsible for environmental issues of plant.

The responsibilities of the various members of the environment management cell are enclosed as

Annexure I.

**CORPORATE OFFICE** : LANSDOWNE TOWER, 2nd Floor, 2/1A, Sanku Bose Road, Kolkata - 700 020

Ph: +91 - 33 - 20547100 / 720097300 • Fax : +91 - 33 - 22800285

**REGD. OFFICE**

: 12, N. S. Road, 2nd Floor, Kolkata - 700 004, Phone No. +91 - 33 - 22428555, 23428553

**Website**

: [www.adhunikgroup.com](http://www.adhunikgroup.com)



# ADHUNIK POWER & NATURAL RESOURCES LIMITED

WORKS: Village - Padampur, Bahadur P.O.S.I.L. Substn,  
 Adityapur - Kandra Road, Sarakela - Kharsawan, PIN - 832402 Jharkhand  
 Phone: +91 - 657 - 8626400, Fax: +91 - 657 - 8626440  
 CIN - U40101WB2006PLC010293E

05.08.2016

Annexure f

## Responsibilities of the members of the environment management cell

S. No.	Designation	Responsibility	Reporting to
01	Managing Director	Environmental policy and directions	
02	Plant Incharge	Overall responsibility for environmental management and decision making for all environmental issues.	Managing Director
03	Environment Manager	Overall in-charge of operation of environmental management facilities of respective sections. Ensure environmental monitoring as per appropriate procedures. Ensure correct records of generation, handling, storage, transportation and disposal of solid hazardous wastes. Ensuring legal compliance by properly undertaking activities as laid down by various regulatory agencies from time to time and interacting with the same and arranging awareness programme among the workers.	Plant Incharge
04	CSR Manager	Responsibility to implement social impact improvement/mitigation measures.	Plant Incharge
05	Safety Manager	Participating in workplace safety and health planning meetings. Ensuring managers and supervisors have the appropriate safety and health. Accident prevention, and investigation & reporting. Ensure safety and health hazards are corrected, eliminated or guarded.	Plant Incharge
06	Medical officer	Attend all types of OED and Emergency Patients. First Aid Treatment to all Cases. Routine Medical Examination of Company Employees. Performing & Conducting various training & awareness programs in company.	Plant Incharge
06	Chemist	To initiate environmental monitoring as per approved schedule. Prepare & Submit the monitored results and corrective measures in case monitored results are above the specified limit.	Environment Manager
07	Horticulture officer	Responsible for development of Green belt & Land Scope on vacant land of Plant premises.	Environment Manager

Sr. Manager (HR)

CORPORATE OFFICE : 'LANSDOWNE TOWER', 2nd Floor, 2/1A, Sarat Bose Road, Kolkata - 700 020

PH : +91 - 33 - 3051700 / 7200 / 7300 • Fax : +91 - 33 - 22690255

REGD. OFFICE

14, N. S. Road, 2nd Floor, Kolkata - 700 001, Phone No: +91 - 33 - 22426568, 22426569

Website

www.adhunikgroup.com



# ADHUNIK POWER & NATURAL RESOURCES LTD.

Formerly Adhunik Thermal Energy Limited

Office: Village Padampur, Behind PGM Substation, Adityapur, Randra Road, P.O: Kandra Sarakela-Kharwan, Jharkhand-833 492 / PHONE: 0657 5628400 & FAX: 0657 5628440  
Website: www.adhunikgroup.com

90

Ref No: APNRL/JSPCB/ES/2018-19/02.

Date: 20th Sep 2019

The Member Secretary  
Jharkhand Pollution Control Board  
Jharkhand

Sub- Submission of Environmental Statement (Form V) for Unit II (1 x 270 MW) of M/s Adhunik Power & Natural Resources Limited, Village- Padampur, Dist- Sarakela-Kharwan, Jharkhand.

Ref: Environmental Clearance letter No J-23012/3/2009-IA, II(T), Dated 09<sup>th</sup> May 2011.

Dear Sir,

In line with compliance of above referred EC letter point No. XIII of general condition, please find attached herewith Environmental statement (Form V) for the financial year 2018-19.

This is for your kind information & record please.

Thanking You

Your's faithfully

Ravinder Aggarwal  
(Head-Environment)

Encl: As mentioned above

CC: 1. The Regional Office (ECZ)

Ministry of Environment & Forest & Climate Change

Bungalow No. A-2, Shyamsal Colony, Ranchi-834002

2. The Regional Officer

Jharkhand Pollution Control Board  
Janshedpur





# ADHUNIK POWER & NATURAL RESOURCES LTD.

(Formerly Adhunik Thermal Energy Limited)

Office: Village Padampur, Behind PGCH Substation, Adityapur, Kandra Road, PO: Kandra, Saraikela-Bharsuwan, Jharkhand-833402. PHONE: 0657 6628300. FAX: 0657 6628440  
Website: www.adhunikgroup.com

Ref: MOE&F, RNC/HYC/RA/22519/02

Dated: 06/06/2019

To,

Regional Office (ECZ),  
Ministry of Environment, Forest and Climate Change,  
Bungalow No. A-2, Shyamal Colony,  
Ranchi - 834002

Sub- Submission of Half yearly compliance status report (Unit II) for the period - October 2018 to March 2019, Reg.

Ref: MoEF EC letter No. J-1301218/2009-(A.II)(T), Dated 09th May 2018.

Sir,

With reference to the above referred Environmental Clearance, we are pleased to submit herewith the half yearly compliance status report (Unit II) for the period of October 2018 to March 2019.

This is for your reference and record, please.

Thanking you,

For Adhunik Power & Natural resources Limited

(Authorized Signatory)

Encl: As Above

Copy to:

- 1) Central Pollution Control Board, Kolkata
- 2) Member Secretary, Jharkhand State Pollution Control Board, Jharkhand
- 3) Regional Director, SPCCB, Jamshedpur



Regd. Office: 14, Netaji Subhas Road, II Floor, Kolkata - 700 305. Phone: 2243-3355, 2242-3351

Office: Padampur, Saraikela, Bharsuwan, Jharkhand

CIN U10101WB2006PLC102935