



ADHUNIK POWER & NATURAL RESOURCES LTD.

(Formerly Adhunik Thermal Energy Limited)

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Ref: MOE&F, RNC/HYC/KKJ/231220/02

Dated: 23.12.2020

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 2020 to September 2020 -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 2020 to September 2020.

This is for your reference and record, please.

Thanking you,

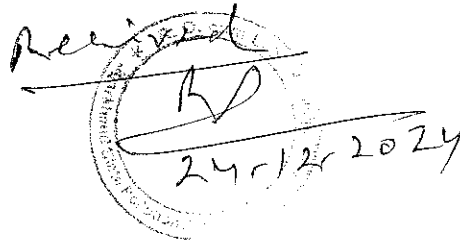
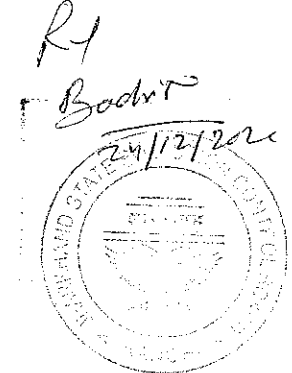
For Adhunik Power & Natural resources Limited

(Authorized Signatory)

Encl: As Above

Copy to:

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



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

Works: Padampur, Seraikela, Kharsawan, Jharkhand

CIN U40101WB2005PLC102935

REPORT

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



APRIL 2020 – SEPTEMBER 2020

**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 2020 to September 2020		
Sl No	EC Conditions	Status as on 30st September 2020
A. Specific Conditions:		
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 th 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 th 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 Annexure I. Complied
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. Complied
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 th Dec 2011. Complied
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 are completed.
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 fulfill 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. Complied

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.	Hydrogeology study is being reviewed annually through reputed institute. Regular monitoring of ground water quality in and around ash pond area including heavy metals is being carried out periodically. Ground water analysis report of upstream & Downstream of Ash pond in compared with baseline data for the month of September 2020 are enclosed as Annexure II.
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 particularly for heavy metals (Hg, Cr,As,Pb) and records maintained and submitted to the Regional Office of this Ministry. The data	Regular monitoring of ground water in and around ash pond area including heavy metals is being carried out & report submitted to MoEF. Ground water analysis report of upstream & Downstream of Ash pond compared with baseline data for the month of September 2020 are enclosed as Annexure II. Installation of Piezometer at prominent

	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.	locations of plant site has been completed. Ground water level of three location of plant Premises are enclosed as Annexure III .
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.	Ground water analysis report of upstream & Downstream of Ash pond and Surface Water Analysis report for the month of September 2020 are enclosed as Annexure II & 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.
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 _x , NO _x and PM _{2.5} & PM ₁₀ . 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 ³ .	High efficient ESPs of 32 fields have installed to ensure control PM emission in flue gas. Stack Monitoring report from For the month of September 2020 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 th year of operation. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	Agreements made with cement plants, brick plants, etc to ensure optimum utilization of fly ash. Fly Ash generation & Utilization report (April 2020 to September 2020) are enclosed as Annexure VI . Utilization of 100% Fly Ash generated has been achieved.

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 September 2020 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 32% - 46%. Concentration of Sulphur is well within the prescribed norms.
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. 68123 nos. (Area covered-30.9 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 March 2020. Survival rate of sapling is 85.5%. Total Survived plants are 58245. Plantation done April 2020 to September 2020 is 1523 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 the Ministry within six months.	Letter has been submitted to Forest Department for guidance on implementation of social forestry.

xxxii.	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.	APNRL has adopted villages - Barahariharpur - Padampur - Srirampur CSR is also providing the facilities in following villages - Pindrabera - Chotahariharpur - Ramjivanpur - Bikanipur etc. Details of CSR activity enclosed as Annexure IX.
xxxiii.	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.	CSR activities are being carried out in the surrounding villages keeping in mind the upliftment of tribal families. 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 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 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	All CSR activities are monitored on weekly and monthly basis. We are in process to conduct social audit through renowned organization who are well aware about Social Audit in Jharkhand region.

B. General Conditions:		
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 September 2020 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 Kl 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. Complied
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. Complied.
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 etc shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non noisy/less noisy areas	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. Noise level monitoring report For the month of September 2020 are enclosed As Annexure XIV.

vii.	Regular monitoring of ambient air ground level concentration of SO ₂ , NO _x , PM _{2.5} & PM ₁₀ and Hg shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry. The data shall also be put on the website of the company.	Ambient Air monitoring reports carried out by NABL accredited Laboratory for the month of September 2020 are enclosed As Annexure XV. Review of air quality monitoring results revealed compliance to NAAQS. Realtime data of CAAQMS has been uploaded at CPCB & JSPCB website.
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 http://envfor.nic.in .	Complied
x.	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad / Municipal Corporation, urban local Body and the Local NGO, if any, from whom suggestions/representations, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	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 improvement/mitigation measures.	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.

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 _{2.5} & PM ₁₀), SO ₂ , NO _x (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 ₂ , NO _x) 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 September 2019 to March 2020 in office of MoEF, Ranchi & CPCB office, Kolkata along with monitored data.
xiii.	The environment statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of 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 (2019-20) in Form V has submitted to JSPCB vide E mail dated 25 th Sep 2020. Acknowledgement copy of same attached as Annexure XVII. Environment Statement (2019-20) 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/24620/02 ,dated 24 TH June 2020. 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 _x (from stack & ambient air) shall be displayed at the main gate of the power plant.	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 ₂ , NO _x) for both ambient air quality and chimney emissions is being displayed at the main gate of the company.

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. Year wise (2020-21) expenditure on Environment measures shall be submitted with closing of Financial year.
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:-19एम01(5)29/2008 2574 दिनांक:-23.7.09

सचिव,
वन एवं पर्यावरण विभाग,
झारखण्ड सरकार, राँची।

मैसर्स आधुनिक थर्मल एनर्जी लिमिटेड के कान्झा पदमपुर, श्री रामपुर, रामचन्द्रपुर मौजा, जिला-सरायकेला-खरसावा में स्थापित किये जाने वाले थर्मल पावर प्रोजेक्ट के लिए पर्यावरणीय स्वीकृति के संबंध में।

विभागीय पत्रांक-308, दिनांक-04.02.09

उपर्युक्त विषयक संदर्भ में सूचित करना है कि प्रधान मुख्य वन संरक्षक, जैव विविधता संरक्षण एवं मुख्य वन्यप्राणी प्रतिपालक, झारखण्ड, राँची ने अपने पत्रांक 463, दिनांक-02.07.2009 (छायाप्रति संलग्न) द्वारा संबंधित विषय पर प्रतिवेदन/मंतव्य समर्पित किया है। उक्त प्रतिवेदन एवं उपलब्ध अभिलेखों के आधार पर प्रस्तावित परियोजना स्थल के संबंध में स्थिति निम्नवत् है :-

1. विषयक थर्मल पावर प्रोजेक्ट काण्डा पदमपुर, श्रीरामपुर, रामचन्द्रपुर मौजा की गैर-वन भूमि पर स्थापित किये जाने का प्रस्ताव है।
2. उपरोक्त पावर प्रोजेक्ट दलमा वन्यप्राणी आश्रयणी की निकटतम सीमा से लगभग 7.5 कि०मी० दूर स्थापित होगा। प्रस्तावित क्षेत्र की 10 कि०मी० त्रिज्या के अंदर अवस्थित वन भूमि सिंहभूम गज आरक्ष्य का भाग है।
3. वन प्रमण्डल पदाधिकारी, वन्यप्राणी प्रमण्डल, राँची के द्वारा पावर प्रोजेक्ट के लिए प्रस्तावित स्थल को प्रस्तावित इको-सेंसिटिव जोन से सटा हुआ बताया गया है, जबकि दलमा वन्यप्राणी आश्रयणी के लिए प्रस्तावित इको-सेंसिटिव जोन से संबंधित जो प्रस्ताव राज्य सरकार को भेजा गया है उसके अनुसार प्रस्तावित स्थल प्रस्तावित इको-सेंसिटिव 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-रूगाई गज-कोरीडोर एवं दलमा-चंडिल गज-कोरीडोर अवस्थित है। इस क्षेत्र के पास एक अन्य गज-कोरीडोर चांडिल-माथा कोरीडोर भी है, जो प्रस्तावित स्थल से 10 कि०मी० से अधिक दूरी पर अवस्थित है। इसके अतिरिक्त कोई अन्य हाथी कोरीडोर प्रस्तावित

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क्षेत्र के पास पूर्व चिन्हित नहीं है। उपरोक्त गज-कोरीडोर को दिखाते हुए नक्शा (अनुलग्नक-2) दो प्रतियों में संलग्न है।

5. वन प्रमण्डल पदाधिकारी, वन्यप्राणी प्रमण्डल, रांची के द्वारा अपने प्रतिवेदन में यह उल्लेख किया गया है कि दलमा वन्यप्राणी आश्रयणी की दक्षिणी सीमा पर स्वर्णरेखा नहर की गहरी खोदाई के कारण इस क्षेत्र में हाथियों का आवागमन अनियमित है। उन्होंने यह भी वर्णित किया है कि आश्रयणी से हाथियों का आवागमन रामगढ़, एन0एच0-33, 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 समीक्षापरांत यह पाया गया है कि यदि हाथियों का आवागमन पूर्ववतः आश्रयणी से पलना जलाशय तक होता भी है तब भी प्रस्तावित स्थल ऐसे किसी 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 कि0मी0(उत्तर पूर्व) की दूरी पर अवस्थित है। प्रस्तावित स्थल होकर हाथियों का आवागमन होने की या कोई पूर्व-स्थापित गज-कोरीडोर होने की कोई ठोस सूचना/प्रमाण उपलब्ध नहीं है।
6. झारखंड राज्य में गज-कोरीडोर को चिन्हित करने का कार्य एक स्वयंसेवी संस्था "वाइल्ड 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 गज-कोरीडोर वर्णित है तथा इसी सूचना के आधार पर कंडिका चार में वर्णित तीन गज कोरीडोर को नक्शे पर दर्शाया गया है।
7. प्रस्तावित स्थल के आसपास कई अन्य उद्योग, यथा पावर ग्रिड कॉरपोरेशन ऑफ इण्डिया लि0, बी0के0 स्टील आई0ओ0सी0एल0, टी0सी0एस0, उषा मार्टिन, नीलांचल स्टील, आदि स्थापित हैं। यह अनुलग्नक-3 पर दो प्रतियों में उपलब्ध नक्शे से स्पष्ट है। इस क्षेत्र में कई उद्योग होने के कारण भी इसे दलमा वन्यप्राणी आश्रयणी के प्रस्तावित इको-सेंसिटिव जोन से बाहर रखा गया था।
8. वन प्रमण्डल पदाधिकारी, वन्यप्राणी प्रमण्डल, रांची ने प्रस्तावित स्थल दलमा आश्रयणी एवं elephant bearing area के समीप होने के कारण हाथियों के आवागमन पर पड़ने वाले प्रतिकूल प्रभाव की संभावना बताते हुए प्रस्तावित परियोजना हेतु अनापत्ति प्रमाण-पत्र निर्गत नहीं करने की अनुशंसा की है। परंतु वन संरक्षक, वन्य प्राणी अंचल, रांची ने वन प्रमण्डल पदाधिकारी द्वारा अपने प्रतिवेदन में उठाए गये विभिन्न विन्दुओं पर

समीक्षात्मक टिप्पणी अंकित करते हुए उनकी अनुशंसा से सहमति व्यक्त नहीं की है, जो उपरोक्त कंडिकाओं में उलेखित तथ्यों एवं संलग्नक मानचित्रों पर आधारित है। प्रधान मुख्य वन संरक्षक, जैव विविधता संरक्षण एवं मुख्य वन्यप्राणी प्रतिपालक, झारखण्ड, रांची, वन संरक्षक के उपर्युक्त मंतव्य से सहमत हैं।

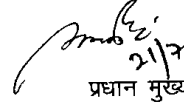
9. प्रधान मुख्य वन संरक्षक, जैव विविधता संरक्षण एवं मुख्य वन्यप्राणी प्रतिपालक, झारखण्ड, रांची द्वारा अग्रलिखित शर्त पर संबंधित परियोजना हेतु एनओसी निर्गत करने की अनुशंसा की गई है कि EIA के ToR की शर्त V के आलोक में प्रयोक्ता अभिकरण को इस आशय की वचनबद्धता देनी होगी कि प्रयोक्ता अभिकरण वन्य प्राणी विशेषज्ञ की मदद से Wildlife Mitigation and Conservation Plan उक्त क्षेत्र विशेष हेतु तैयार करा कर EIA में शामिल करेंगे और उक्त योजना का कार्यान्वयन वन विभाग के माध्यम से प्रयोक्ता अभिकरण की लागत पर किया जायेगा।

प्रधान मुख्य वन संरक्षक, जैव विविधता संरक्षण एवं मुख्य वन्यप्राणी प्रतिपालक, झारखण्ड, रांची के उपर्युक्त मंतव्य से अद्योहस्ताक्षरी सहमत हैं।

अनुरोध है कि विषयगत पर्यावरणीय स्वीकृति पर अग्रतर कार्यवाई करने की कृपा की जाय।

अनु०—यथोक्त।

विश्वासभाजन,



प्रधान मुख्य वन संरक्षक,
झारखण्ड, रांची।

21/7
19/7



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ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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Certificate No. - TC 7813

ANALYTICAL TEST REPORT

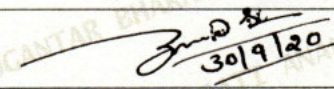
Water Test Report		URL(Unique Lab Report) No.	
Date of Issue		TC78132010000061P, TC78132040000038F	
Sample Description		Report ID	
Type of Industries		YBAEEL-200304-132814 -GW03	
Issued to: -		Job code / Ref. no.	
M/s Adhunik Power & Natural Resources Limited (Unit -1)		YBAEEL/WA/L/C/Sep.-20/13 (M-03)	
Vill.- Padampur, Behind PGCIL Sub-station,		Work Order No./ Date	
Jamshedpur-832105, Jharkhand.		3030004681 - 18/02/2020	
Sampling date		Mode of sample Collection	
26/09/2020		By YBAEEL Team	
Sampling Protocol		Sample Code	
IS : 3025 (Part-1) 1987, R-2003		200927 - GW - E01	
Sampling Location		Sampling Source	
Shrirampur - Down stream		Ground Water (Hand Pump & Borewell)	
Sample pkg. Condition		Sample Quantity	
Sealed Pack in PP Bottle		4000 ml	
Meteorological cond.		RH - 74 %	
W.C. - Partly Cloudy		Temp. - 26°C	
Work allotted date		Test started on	
27/09/2020		27/09/2020	
		Test completed on	
		30/09/2020	

Test Result

SI	Parameter	Test Method	Units	Results	Baseline Ground Water Quality*	Limits
1.	pH value	IS 3025 (P-11):2002	pH	7.12	6.9 - 7.4	6.5-8.5
2.	Colour	IS 3025 (P-04):1983	Hazen	<5	<5	15, max
3.	Odour*	IS 3025 (P-05):	--	Agree.	Unobjectionable	Agreeable
4.	Taste*	IS 3025 (P-07):	--	Agree.	Agreeable	Agreeable
5.	Turbidity	IS 3025 (P-10):2002	NTU	3.0	<5	5, max
6.	Alkalinity (as CaCO ₃)	IS 3025 (P-23):2003	mg/l	162.0	147-269	600, max
7.	Total Hardness (as CaCO ₃)	IS 3025 (P-21):2009	mg/l	182.0	128-308	600, max
8.	Total dissolved solids	IS 3025 (P-16):2006	mg/l	312.0	251-538	2000, max
9.	Chlorine Residual	IS 3025 (P-26):2003	mg/l	ND (DL 0.07)	<0.05	1, max
10.	Chloride (as Cl ⁻)	IS 3025 (P-32):2003	mg/l	43.3	42-74	1000, max
11.	Fluoride (as F ⁻)	APHA 4500 F-C 23 rd edition 2017	mg/l	0.2	0.31-0.50	1.5, max
12.	Nitrate (as NO ₃ ⁻)	APHA 4500 NO ₃ ⁻ (B) 23 rd edition 2017	mg/l	9.64	03-24	45, max
13.	Arsenic (as As)	APHA 3114 B 23 rd edition 2017	mg/l	ND (DL 0.01)	<0.01	0.01-0.05
14.	Calcium (as CaCO ₃)	IS 3025 (P-40): 2003	mg/l	47.2	41-99	200, max
15.	Chromium (as Cr)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.05)	<0.01	0.05, max
16.	Copper (as Cu)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.01)	<0.01	1.5, max
17.	Iron (as Fe)	APHA 3111 B 23 rd edition 2017	mg/l	0.31	0.13-0.90	0.3, max
18.	Lead (as Pb)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.01)	<0.01	0.01, max
19.	Zinc (as Zn)	APHA 3111 B 23 rd edition 2017	mg/l	0.33	0.31-0.47	15, max
20.	Cadmium (as Cd)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.001)	<0.01	0.003, max
21.	Sulphate (as SO ₄ ²⁻)	IS 3025 (P-24):2003	mg/l	11.8	06-28	400, max
22.	Mercury (as Hg)	APHA 3112 B 23 rd edition 2017	mg/l	ND (DL 0.003)	<0.001	0.001, max
23.	Total Coliform	APHA (22 nd Edition 2012) 9221-B	MPN/100ml	< 1.1	ND	Shall not be detectable in any 100 ml Sample
24.	Fecal Coliform	APHA (22 nd Edition 2012) 9221-E		< 1.1	ND	

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

*Provided by Customer

		
Tested by Prem Kumar	Checked by Mukesh Kumar	Issued by Umesh Das
Lab Analyst	Authorized Signatory	Technical Manager



Branch Office : - Jamshedpur Dhanbad Hazaribag Pakur

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Certificate No. - TC 7813

ANALYTICAL TEST REPORT

Water Test Report		URL(Unique Lab Report) No.	TC78132010000062P, TC78132040000039F
Date of Issue	30 th September 2020	Report ID	YBAEEL-200304-132814 -GW04
Sample Description	Ground Water	Job code / Ref. no.	YBAEEL/WA/L/C/Sep.-20/13 (M-03)
Type of Industries	Thermal Power Plant	Work Order No./ Date	3030004681 - 18/02/2020
Issued to: -	M/s Adhunik Power & Natural Resources Limited (Unit -1) Vill.- Padampur, Behind PGCIL Sub-station, Jamshedpur-832105, Jharkhand.		

Sampling date	26/09/2020	Mode of sample Collection	By YBAEEL Team		
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003	Sample Code	200927 – GW – E02		
Sampling Location	Padampur Village (Upstream)	Sampling Source	Ground Water (Hand Pump & Borewell)		
Sample pkg. Condition	Sealed Pack in PP Bottle	Sample Quantity	4000 ml		
Meteorological cond.	W.C. – Partly Cloudy	RH – 74 %	Temp. – 26°C		
Work allotted date	27/09/2020	Test started on	27/09/2020	Test completed on	30/09/2020

Test Result

Sl	Parameter	Test Method	Units	Results	Baseline Ground Water Quality*	Limits
1.	pH value	IS 3025 (P-11):2002	pH	7.69	6.9 - 7.4	6.5-8.5
2.	Colour	IS 3025 (P-04):1983	Hazen	<5	<5	15, max
3.	Odour*	IS 3025 (P-05):	--	Agree.	Unobjectionable	Agreeable
4.	Taste*	IS 3025 (P-07):	--	Agree.	Agreeable	Agreeable
5.	Turbidity	IS 3025 (P-10):2002	NTU	4.0	<5	5, max
6.	Alkalinity (as CaCO ₃)	IS 3025 (P-23):2003	mg/l	154.0	147-269	600, max
7.	Total Hardness (as CaCO ₃)	IS 3025 (P-21):2009	mg/l	168.0	128-308	600, max
8.	Total dissolved solids	IS 3025 (P-16):2006	mg/l	292.0	251-538	2000, max
9.	Chlorine Residual	IS 3025 (P-26):2003	mg/l	ND (DL 0.07)	<0.05	1, max
10.	Chloride (as Cl ⁻)	IS 3025 (P-32):2003	mg/l	47.0	42-74	1000, max
11.	Fluoride (as F ⁻)	APHA 4500 F-C 23 rd edition 2017	mg/l	0.4	0.31-0.50	1.5, max
12.	Nitrate (as NO ₃ ⁻)	APHA 4500 NO ₃ ⁻ (B) 23 rd edition 2017	mg/l	12.08	03-24	45, max
13.	Arsenic (as As)	APHA 3114 B 23 rd edition 2017	mg/l	ND (DL 0.01)	<0.01	0.01-0.05
14.	Calcium (as CaCO ₃)	IS 3025 (P-40): 2003	mg/l	50.4	41-99	200, max
15.	Chromium (as Cr)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.05)	<0.01	0.05, max
16.	Copper (as Cu)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.01)	<0.01	1.5, max
17.	Iron (as Fe)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.02)	0.13-0.90	0.3, max
18.	Lead (as Pb)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.01)	<0.01	0.01, max
19.	Zinc (as Zn)	APHA 3111 B 23 rd edition 2017	mg/l	0.38	0.31-0.47	15, max
20.	Cadmium (as Cd)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.001)	<0.01	0.003, max
21.	Sulphate (as SO ₄ ²⁻)	IS 3025 (P-24):2003	mg/l	23.9	06-28	400, max
22.	Mercury (as Hg)	APHA 3112 B 23 rd edition 2017	mg/l	ND (DL 0.003)	<0.001	0.001, max
23.	Total Coliform	APHA (22 nd Edition 2012) 9221-B	MPN/100ml	< 1.1	ND	Shall not be detectable in any 100 ml Sample
24.	Fecal Coliform	APHA (22 nd Edition 2012) 9221-E		< 1.1	ND	

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

*Provided by Customer

Tested by Prem Kumar Lab Analyst	Checked by Mukesh Kumar Incharge - Water Section	Issued by Umesh Das Technical Manager



Branch Office: - Jamshedpur Dhanbad Hazaribag Pakur

Page 1 of 1

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BS OHSAS 18001:2007

Cordinates: 22°50'20.5" 86°03'46.5"E

DATE	TIME	WATER LEVEL (m)
01-Apr-20	01:00:00	0.93
01-Apr-20	07:00:00	1.01
01-Apr-20	13:00:00	1.06
01-Apr-20	19:00:00	1.05
02-Apr-20	01:00:00	1.06
02-Apr-20	07:00:00	1.03
02-Apr-20	13:00:00	0.98
02-Apr-20	19:00:00	0.98
03-Apr-20	01:00:00	0.99
03-Apr-20	07:00:00	0.99
03-Apr-20	13:00:00	0.98
03-Apr-20	19:00:00	0.98
04-Apr-20	01:00:00	0.99
04-Apr-20	07:00:00	0.99
04-Apr-20	13:00:00	0.99
04-Apr-20	19:00:00	0.97
05-Apr-20	01:00:00	0.94
05-Apr-20	07:00:00	0.94
05-Apr-20	13:00:00	0.93
05-Apr-20	19:00:00	0.91
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06-Apr-20	07:00:00	0.91
06-Apr-20	13:00:00	0.91
06-Apr-20	19:00:00	0.94
07-Apr-20	01:00:00	0.94
07-Apr-20	07:00:00	0.95
07-Apr-20	13:00:00	0.97
07-Apr-20	19:00:00	1
08-Apr-20	01:00:00	1
08-Apr-20	07:00:00	1.03
08-Apr-20	13:00:00	0.99
08-Apr-20	19:00:00	0.96
09-Apr-20	01:00:00	0.96
09-Apr-20	07:00:00	0.97
09-Apr-20	13:00:00	0.98
09-Apr-20	19:00:00	0.97
10-Apr-20	01:00:00	0.98
10-Apr-20	07:00:00	0.99
10-Apr-20	13:00:00	0.97
10-Apr-20	19:00:00	0.95
11-Apr-20	01:00:00	0.93
11-Apr-20	07:00:00	0.9
11-Apr-20	13:00:00	0.87
11-Apr-20	19:00:00	0.87
12-Apr-20	01:00:00	0.87
12-Apr-20	07:00:00	0.88
12-Apr-20	13:00:00	0.93
12-Apr-20	19:00:00	0.93

13-Apr-20	01:00:00	0.99
13-Apr-20	07:00:00	1.04
13-Apr-20	13:00:00	1.08
13-Apr-20	19:00:00	1.07
14-Apr-20	01:00:00	1.05
14-Apr-20	07:00:00	1.05
14-Apr-20	13:00:00	0.97
14-Apr-20	19:00:00	0.93
15-Apr-20	01:00:00	0.92
15-Apr-20	07:00:00	0.94
15-Apr-20	13:00:00	0.94
15-Apr-20	19:00:00	0.94
16-Apr-20	01:00:00	0.95
16-Apr-20	07:00:00	0.95
16-Apr-20	13:00:00	0.96
16-Apr-20	19:00:00	0.94
17-Apr-20	01:00:00	0.93
17-Apr-20	07:00:00	0.9
17-Apr-20	13:00:00	0.89
17-Apr-20	19:00:00	0.87
18-Apr-20	01:00:00	0.86
18-Apr-20	07:00:00	0.9
18-Apr-20	13:00:00	0.93
18-Apr-20	19:00:00	0.96
19-Apr-20	01:00:00	1.02
19-Apr-20	07:00:00	1.07
19-Apr-20	13:00:00	1.06
19-Apr-20	19:00:00	1.09
20-Apr-20	01:00:00	1.08
20-Apr-20	07:00:00	1.08
20-Apr-20	13:00:00	1
20-Apr-20	19:00:00	0.94
21-Apr-20	01:00:00	0.9
21-Apr-20	07:00:00	0.92
21-Apr-20	13:00:00	0.91
21-Apr-20	19:00:00	0.91
22-Apr-20	01:00:00	0.92
22-Apr-20	07:00:00	0.93
22-Apr-20	13:00:00	0.93
22-Apr-20	19:00:00	0.92
23-Apr-20	01:00:00	0.91
23-Apr-20	07:00:00	0.9
23-Apr-20	13:00:00	0.87
23-Apr-20	19:00:00	0.85
24-Apr-20	01:00:00	0.9
24-Apr-20	07:00:00	0.89
24-Apr-20	13:00:00	0.94
24-Apr-20	19:00:00	0.99
25-Apr-20	01:00:00	1.03
25-Apr-20	07:00:00	1.04

25-Apr-20	13:00:00	1.01
25-Apr-20	19:00:00	1
26-Apr-20	01:00:00	1
26-Apr-20	07:00:00	0.96
26-Apr-20	13:00:00	0.89
26-Apr-20	19:00:00	0.81
27-Apr-20	01:00:00	0.79
27-Apr-20	07:00:00	0.81
27-Apr-20	13:00:00	0.8
27-Apr-20	19:00:00	0.82
28-Apr-20	01:00:00	0.81
28-Apr-20	07:00:00	0.81
28-Apr-20	13:00:00	0.81
28-Apr-20	19:00:00	0.81
29-Apr-20	01:00:00	0.8
29-Apr-20	07:00:00	0.8
29-Apr-20	13:00:00	0.78
29-Apr-20	19:00:00	0.78
30-Apr-20	01:00:00	0.78
30-Apr-20	07:00:00	0.83
30-Apr-20	13:00:00	0.86
30-Apr-20	19:00:00	0.95
01-May-20	01:00:00	0.89
01-May-20	07:00:00	1.01
01-May-20	13:00:00	1.06
01-May-20	19:00:00	1.07
02-May-20	01:00:00	1
02-May-20	07:00:00	0.94
02-May-20	13:00:00	0.86
02-May-20	19:00:00	0.76
03-May-20	01:00:00	0.75
03-May-20	07:00:00	0.75
03-May-20	13:00:00	0.74
03-May-20	19:00:00	0.75
04-May-20	01:00:00	0.76
04-May-20	07:00:00	0.76
04-May-20	13:00:00	0.77
04-May-20	19:00:00	0.77
05-May-20	01:00:00	0.77
05-May-20	07:00:00	0.76
05-May-20	13:00:00	0.75
05-May-20	19:00:00	0.75
06-May-20	01:00:00	0.74
06-May-20	07:00:00	0.75
06-May-20	13:00:00	0.8
06-May-20	19:00:00	0.9
07-May-20	01:00:00	0.95
07-May-20	07:00:00	0.93
07-May-20	13:00:00	1.06
07-May-20	19:00:00	0.89

08-May-20	01:00:00	0.83
08-May-20	07:00:00	0.76
08-May-20	13:00:00	0.71
08-May-20	19:00:00	0.68
09-May-20	01:00:00	0.64
09-May-20	07:00:00	0.62
09-May-20	13:00:00	0.62
09-May-20	19:00:00	0.62
10-May-20	01:00:00	0.63
10-May-20	07:00:00	0.64
10-May-20	13:00:00	0.65
10-May-20	19:00:00	0.66
11-May-20	01:00:00	0.65
11-May-20	07:00:00	0.65
11-May-20	13:00:00	0.61
11-May-20	19:00:00	0.6
12-May-20	01:00:00	0.59
12-May-20	07:00:00	0.58
12-May-20	13:00:00	0.58
12-May-20	19:00:00	0.63
13-May-20	01:00:00	0.65
13-May-20	07:00:00	0.73
13-May-20	13:00:00	0.8
13-May-20	19:00:00	0.82
14-May-20	01:00:00	0.79
14-May-20	07:00:00	0.73
14-May-20	13:00:00	0.69
14-May-20	19:00:00	0.68
15-May-20	01:00:00	0.67
15-May-20	07:00:00	0.66
15-May-20	13:00:00	0.65
15-May-20	19:00:00	0.65
16-May-20	01:00:00	0.65
16-May-20	07:00:00	0.67
16-May-20	13:00:00	0.68
16-May-20	19:00:00	0.69
17-May-20	01:00:00	0.69
17-May-20	07:00:00	0.69
17-May-20	13:00:00	0.69
17-May-20	19:00:00	0.66
18-May-20	01:00:00	0.65
18-May-20	07:00:00	0.65
18-May-20	13:00:00	0.65
18-May-20	19:00:00	0.65
19-May-20	01:00:00	0.64
19-May-20	07:00:00	0.64
19-May-20	13:00:00	0.63
19-May-20	19:00:00	0.63
20-May-20	01:00:00	0.7
20-May-20	07:00:00	0.68

20-May-20	13:00:00	0.69
20-May-20	19:00:00	0.67
21-May-20	01:00:00	0.66
21-May-20	07:00:00	0.64
21-May-20	13:00:00	0.62
21-May-20	19:00:00	0.62
22-May-20	01:00:00	0.64
22-May-20	07:00:00	0.6
22-May-20	13:00:00	0.64
22-May-20	19:00:00	0.64
23-May-20	01:00:00	0.64
23-May-20	07:00:00	0.65
23-May-20	13:00:00	0.64
23-May-20	19:00:00	0.6
24-May-20	01:00:00	0.62
24-May-20	07:00:00	0.63
24-May-20	13:00:00	0.65
24-May-20	19:00:00	0.7
25-May-20	01:00:00	0.76
25-May-20	07:00:00	0.81
25-May-20	13:00:00	0.8
25-May-20	19:00:00	0.85
26-May-20	01:00:00	0.84
26-May-20	07:00:00	0.77
26-May-20	13:00:00	0.74
26-May-20	19:00:00	0.66
27-May-20	01:00:00	0.63
27-May-20	07:00:00	0.63
27-May-20	13:00:00	0.58
27-May-20	19:00:00	0.58
28-May-20	01:00:00	0.57
28-May-20	07:00:00	0.57
28-May-20	13:00:00	0.57
28-May-20	19:00:00	0.58
29-May-20	01:00:00	0.6
29-May-20	07:00:00	0.59
29-May-20	13:00:00	0.58
29-May-20	19:00:00	0.58
30-May-20	01:00:00	0.58
30-May-20	07:00:00	0.59
30-May-20	13:00:00	0.62
30-May-20	19:00:00	0.67
31-May-20	01:00:00	0.72
31-May-20	07:00:00	0.74
31-May-20	13:00:00	0.78
31-May-20	19:00:00	0.79
01-Jun-20	01:00:00	0.76
01-Jun-20	07:00:00	0.73
01-Jun-20	13:00:00	0.69
01-Jun-20	19:00:00	0.63

02-Jun-20	01:00:00	0.64
02-Jun-20	07:00:00	0.61
02-Jun-20	13:00:00	0.6
02-Jun-20	19:00:00	0.58
03-Jun-20	01:00:00	0.57
03-Jun-20	07:00:00	0.58
03-Jun-20	13:00:00	0.58
03-Jun-20	19:00:00	0.58
04-Jun-20	01:00:00	0.59
04-Jun-20	07:00:00	0.59
04-Jun-20	13:00:00	0.58
04-Jun-20	19:00:00	0.58
05-Jun-20	01:00:00	0.58
05-Jun-20	07:00:00	0.58
05-Jun-20	13:00:00	0.63
05-Jun-20	19:00:00	0.67
06-Jun-20	01:00:00	0.68
06-Jun-20	07:00:00	0.77
06-Jun-20	13:00:00	0.73
06-Jun-20	19:00:00	0.73
07-Jun-20	01:00:00	0.74
07-Jun-20	07:00:00	0.72
07-Jun-20	13:00:00	0.68
07-Jun-20	19:00:00	0.64
08-Jun-20	01:00:00	0.62
08-Jun-20	07:00:00	0.62
08-Jun-20	13:00:00	0.6
08-Jun-20	19:00:00	0.59
09-Jun-20	01:00:00	0.57
09-Jun-20	07:00:00	0.57
09-Jun-20	13:00:00	0.58
09-Jun-20	19:00:00	0.58
10-Jun-20	01:00:00	0.58
10-Jun-20	07:00:00	0.58
10-Jun-20	13:00:00	0.58
10-Jun-20	19:00:00	0.57
11-Jun-20	01:00:00	0.57
11-Jun-20	07:00:00	0.57
11-Jun-20	13:00:00	0.57
11-Jun-20	19:00:00	0.62
12-Jun-20	01:00:00	0.67
12-Jun-20	07:00:00	0.66
12-Jun-20	13:00:00	0.64
12-Jun-20	19:00:00	0.78
13-Jun-20	01:00:00	0.67
13-Jun-20	07:00:00	0.63
13-Jun-20	13:00:00	0.65
13-Jun-20	19:00:00	0.66
14-Jun-20	01:00:00	0.61
14-Jun-20	07:00:00	0.63

14-Jun-20	13:00:00	0.63
14-Jun-20	19:00:00	0.63
15-Jun-20	01:00:00	0.63
15-Jun-20	07:00:00	0.61
15-Jun-20	13:00:00	0.61
15-Jun-20	19:00:00	0.6
16-Jun-20	01:00:00	0.59
16-Jun-20	07:00:00	0.58
16-Jun-20	13:00:00	0.58
16-Jun-20	19:00:00	0.57
17-Jun-20	01:00:00	0.58
17-Jun-20	07:00:00	0.58
17-Jun-20	13:00:00	0.59
17-Jun-20	19:00:00	0.6
18-Jun-20	01:00:00	0.66
18-Jun-20	07:00:00	0.69
18-Jun-20	13:00:00	0.69
18-Jun-20	19:00:00	0.71
19-Jun-20	01:00:00	0.67
19-Jun-20	07:00:00	0.68
19-Jun-20	13:00:00	0.67
19-Jun-20	19:00:00	0.69
20-Jun-20	01:00:00	0.69
20-Jun-20	07:00:00	0.68
20-Jun-20	13:00:00	0.67
20-Jun-20	19:00:00	0.67
21-Jun-20	01:00:00	0.69
21-Jun-20	07:00:00	0.72
21-Jun-20	13:00:00	0.7
21-Jun-20	19:00:00	0.72
22-Jun-20	01:00:00	0.74
22-Jun-20	07:00:00	0.73
22-Jun-20	13:00:00	0.72
22-Jun-20	19:00:00	0.7
23-Jun-20	01:00:00	0.71
23-Jun-20	07:00:00	0.71
23-Jun-20	13:00:00	0.69
23-Jun-20	19:00:00	0.68
24-Jun-20	01:00:00	0.67
24-Jun-20	07:00:00	0.67
24-Jun-20	13:00:00	0.66
24-Jun-20	19:00:00	0.67
25-Jun-20	01:00:00	0.68
25-Jun-20	07:00:00	0.67
25-Jun-20	13:00:00	0.69
25-Jun-20	19:00:00	0.71
26-Jun-20	01:00:00	0.72
26-Jun-20	07:00:00	0.81
26-Jun-20	13:00:00	0.86
26-Jun-20	19:00:00	0.86

27-Jun-20	01:00:00	0.77
27-Jun-20	07:00:00	0.74
27-Jun-20	13:00:00	0.7
27-Jun-20	19:00:00	0.7
28-Jun-20	01:00:00	0.7
28-Jun-20	07:00:00	0.71
28-Jun-20	13:00:00	0.7
28-Jun-20	19:00:00	0.72
29-Jun-20	01:00:00	0.71
29-Jun-20	07:00:00	0.71
29-Jun-20	13:00:00	0.7
29-Jun-20	19:00:00	0.68
30-Jun-20	01:00:00	0.66
30-Jun-20	07:00:00	0.66
30-Jun-20	13:00:00	0.65
30-Jun-20	19:00:00	0.66
01-Jul-20	01:00:00	0.68
01-Jul-20	07:00:00	0.7
01-Jul-20	13:00:00	0.7
01-Jul-20	19:00:00	0.73
02-Jul-20	01:00:00	0.87
02-Jul-20	07:00:00	0.89
02-Jul-20	13:00:00	0.82
02-Jul-20	19:00:00	0.73
03-Jul-20	01:00:00	0.76
03-Jul-20	07:00:00	0.73
03-Jul-20	13:00:00	0.71
03-Jul-20	19:00:00	0.71
04-Jul-20	01:00:00	0.71
04-Jul-20	07:00:00	0.72
04-Jul-20	13:00:00	0.73
04-Jul-20	19:00:00	0.74
05-Jul-20	01:00:00	0.74
05-Jul-20	07:00:00	0.73
05-Jul-20	13:00:00	0.71
05-Jul-20	19:00:00	0.69
06-Jul-20	01:00:00	0.67
06-Jul-20	07:00:00	0.65
06-Jul-20	13:00:00	0.65
06-Jul-20	19:00:00	0.65
07-Jul-20	01:00:00	0.65
07-Jul-20	07:00:00	0.67
07-Jul-20	13:00:00	0.71
07-Jul-20	19:00:00	0.76
08-Jul-20	01:00:00	0.76
08-Jul-20	07:00:00	0.76
08-Jul-20	13:00:00	0.74
08-Jul-20	19:00:00	0.82
09-Jul-20	01:00:00	0.75
09-Jul-20	07:00:00	0.75

09-Jul-20	13:00:00	0.75
09-Jul-20	19:00:00	0.74
10-Jul-20	01:00:00	0.74
10-Jul-20	07:00:00	0.75
10-Jul-20	13:00:00	0.75
10-Jul-20	19:00:00	0.75
11-Jul-20	01:00:00	0.76
11-Jul-20	07:00:00	0.76
11-Jul-20	13:00:00	0.76
11-Jul-20	19:00:00	0.75
12-Jul-20	01:00:00	0.74
12-Jul-20	07:00:00	0.73
12-Jul-20	13:00:00	0.7
12-Jul-20	19:00:00	0.69
13-Jul-20	01:00:00	0.7
13-Jul-20	07:00:00	0.72
13-Jul-20	13:00:00	0.75
13-Jul-20	19:00:00	0.79
14-Jul-20	01:00:00	0.82
14-Jul-20	07:00:00	0.87
14-Jul-20	13:00:00	0.94
14-Jul-20	19:00:00	0.94
15-Jul-20	01:00:00	0.84
15-Jul-20	07:00:00	0.78
15-Jul-20	13:00:00	0.77
15-Jul-20	19:00:00	0.75
16-Jul-20	01:00:00	0.75
16-Jul-20	07:00:00	0.75
16-Jul-20	13:00:00	0.76
16-Jul-20	19:00:00	0.77
17-Jul-20	01:00:00	0.79
17-Jul-20	07:00:00	0.8
17-Jul-20	13:00:00	0.8
17-Jul-20	19:00:00	0.78
18-Jul-20	01:00:00	0.77
18-Jul-20	07:00:00	0.76
18-Jul-20	13:00:00	0.76
18-Jul-20	19:00:00	0.76
19-Jul-20	01:00:00	0.75
19-Jul-20	07:00:00	0.76
19-Jul-20	13:00:00	0.76
19-Jul-20	19:00:00	0.8
20-Jul-20	01:00:00	0.82
20-Jul-20	07:00:00	0.83
20-Jul-20	13:00:00	0.86
20-Jul-20	19:00:00	0.92
21-Jul-20	01:00:00	0.9
21-Jul-20	07:00:00	0.84
21-Jul-20	13:00:00	0.84
21-Jul-20	19:00:00	0.82

22-Jul-20	01:00:00	0.82
22-Jul-20	07:00:00	0.82
22-Jul-20	13:00:00	0.85
22-Jul-20	19:00:00	0.88
23-Jul-20	01:00:00	0.9
23-Jul-20	07:00:00	0.9
23-Jul-20	13:00:00	0.91
23-Jul-20	19:00:00	0.9
24-Jul-20	01:00:00	0.9
24-Jul-20	07:00:00	0.88
24-Jul-20	13:00:00	0.87
24-Jul-20	19:00:00	0.89
25-Jul-20	01:00:00	0.91
25-Jul-20	07:00:00	0.93
25-Jul-20	13:00:00	0.98
25-Jul-20	19:00:00	1.01
26-Jul-20	01:00:00	1.02
26-Jul-20	07:00:00	1.05
26-Jul-20	13:00:00	1.06
26-Jul-20	19:00:00	1.07
27-Jul-20	01:00:00	1.04
27-Jul-20	07:00:00	1.03
27-Jul-20	13:00:00	1.03
27-Jul-20	19:00:00	1.02
28-Jul-20	01:00:00	1.02
28-Jul-20	07:00:00	1.02
28-Jul-20	13:00:00	1.03
28-Jul-20	19:00:00	1.03
29-Jul-20	01:00:00	1.04
29-Jul-20	07:00:00	1.04
29-Jul-20	13:00:00	1.04
29-Jul-20	19:00:00	1.03
30-Jul-20	01:00:00	1.02
30-Jul-20	07:00:00	1
30-Jul-20	13:00:00	1
30-Jul-20	19:00:00	0.99
31-Jul-20	01:00:00	0.99
31-Jul-20	07:00:00	1
31-Jul-20	13:00:00	1.02
31-Jul-20	19:00:00	1.13
01-Aug-20	01:00:00	1.18
01-Aug-20	07:00:00	1.21
01-Aug-20	13:00:00	1.18
01-Aug-20	19:00:00	1.15
02-Aug-20	01:00:00	1.14
02-Aug-20	07:00:00	1.09
02-Aug-20	13:00:00	1.05
02-Aug-20	19:00:00	1.03
03-Aug-20	01:00:00	1.02
03-Aug-20	07:00:00	1.02

03-Aug-20	13:00:00	1.02
03-Aug-20	19:00:00	1.02
04-Aug-20	01:00:00	1.03
04-Aug-20	07:00:00	1.03
04-Aug-20	13:00:00	1.03
04-Aug-20	19:00:00	1.02
05-Aug-20	01:00:00	1.02
05-Aug-20	07:00:00	1
05-Aug-20	13:00:00	1
05-Aug-20	19:00:00	1
06-Aug-20	01:00:00	1
06-Aug-20	07:00:00	1.01
06-Aug-20	13:00:00	1.04
06-Aug-20	19:00:00	1.08
07-Aug-20	01:00:00	1.14
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09-Aug-20	19:00:00	1.02
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11-Aug-20	19:00:00	1.02
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12-Aug-20	07:00:00	1.03
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13-Aug-20	01:00:00	1.19
13-Aug-20	07:00:00	1.24
13-Aug-20	13:00:00	1.23
13-Aug-20	19:00:00	1.22
14-Aug-20	01:00:00	1.23
14-Aug-20	07:00:00	1.19
14-Aug-20	13:00:00	1.19
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15-Aug-20	01:00:00	1.14
15-Aug-20	07:00:00	1.12
15-Aug-20	13:00:00	1.14
15-Aug-20	19:00:00	1.13

16-Aug-20	01:00:00	1.16
16-Aug-20	07:00:00	1.17
16-Aug-20	13:00:00	1.17
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18-Aug-20	07:00:00	1.14
18-Aug-20	13:00:00	1.16
18-Aug-20	19:00:00	1.23
19-Aug-20	01:00:00	1.26
19-Aug-20	07:00:00	1.24
19-Aug-20	13:00:00	1.22
19-Aug-20	19:00:00	1.28
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21-Aug-20	01:00:00	1.25
21-Aug-20	07:00:00	1.24
21-Aug-20	13:00:00	1.23
21-Aug-20	19:00:00	1.22
22-Aug-20	01:00:00	1.23
22-Aug-20	07:00:00	1.22
22-Aug-20	13:00:00	1.22
22-Aug-20	19:00:00	1.21
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23-Aug-20	07:00:00	1.2
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24-Aug-20	01:00:00	1.18
24-Aug-20	07:00:00	1.2
24-Aug-20	13:00:00	1.25
24-Aug-20	19:00:00	1.29
25-Aug-20	01:00:00	1.24
25-Aug-20	07:00:00	1.26
25-Aug-20	13:00:00	1.28
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26-Aug-20	01:00:00	1.28
26-Aug-20	07:00:00	1.24
26-Aug-20	13:00:00	1.23
26-Aug-20	19:00:00	1.22
27-Aug-20	01:00:00	1.19
27-Aug-20	07:00:00	1.18
27-Aug-20	13:00:00	1.18
27-Aug-20	19:00:00	1.17
28-Aug-20	01:00:00	1.18
28-Aug-20	07:00:00	1.17

28-Aug-20	13:00:00	1.17
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31-Aug-20	01:00:00	1.36
31-Aug-20	07:00:00	1.34
31-Aug-20	13:00:00	1.23
31-Aug-20	19:00:00	1.25
01-Sep-20	01:00:00	1.24
01-Sep-20	07:00:00	1.24
01-Sep-20	13:00:00	1.22
01-Sep-20	19:00:00	1.21
02-Sep-20	01:00:00	1.19
02-Sep-20	07:00:00	1.19
02-Sep-20	13:00:00	1.17
02-Sep-20	19:00:00	1.17
03-Sep-20	01:00:00	1.16
03-Sep-20	07:00:00	1.16
03-Sep-20	13:00:00	1.14
03-Sep-20	19:00:00	1.15
04-Sep-20	01:00:00	1.14
04-Sep-20	07:00:00	1.15
04-Sep-20	13:00:00	1.13
04-Sep-20	19:00:00	1.17
05-Sep-20	01:00:00	1.2
05-Sep-20	07:00:00	1.27
05-Sep-20	13:00:00	1.37
05-Sep-20	19:00:00	1.37
06-Sep-20	01:00:00	1.33
06-Sep-20	07:00:00	1.23
06-Sep-20	13:00:00	1.24
06-Sep-20	19:00:00	1.25
07-Sep-20	01:00:00	1.24
07-Sep-20	07:00:00	1.23
07-Sep-20	13:00:00	1.2
07-Sep-20	19:00:00	1.17
08-Sep-20	01:00:00	1.17
08-Sep-20	07:00:00	1.16
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08-Sep-20	19:00:00	1.14
09-Sep-20	01:00:00	1.14
09-Sep-20	07:00:00	1.13
09-Sep-20	13:00:00	1.11
09-Sep-20	19:00:00	1.11

10-Sep-20	01:00:00	1.1
10-Sep-20	07:00:00	1.11
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11-Sep-20	19:00:00	1.25
12-Sep-20	01:00:00	1.3
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13-Sep-20	13:00:00	1.17
13-Sep-20	19:00:00	1.16
14-Sep-20	01:00:00	1.15
14-Sep-20	07:00:00	1.14
14-Sep-20	13:00:00	1.13
14-Sep-20	19:00:00	1.11
15-Sep-20	01:00:00	1.11
15-Sep-20	07:00:00	1.09
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17-Sep-20	19:00:00	1.34
18-Sep-20	01:00:00	1.3
18-Sep-20	07:00:00	1.24
18-Sep-20	13:00:00	1.23
18-Sep-20	19:00:00	1.17
19-Sep-20	01:00:00	1.14
19-Sep-20	07:00:00	1.12
19-Sep-20	13:00:00	1.12
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23-Sep-20	07:00:00	1.16
23-Sep-20	13:00:00	1.2
23-Sep-20	19:00:00	1.23
24-Sep-20	01:00:00	1.21
24-Sep-20	07:00:00	1.2
24-Sep-20	13:00:00	1.18
24-Sep-20	19:00:00	1.13
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28-Sep-20	07:00:00	1.07
28-Sep-20	13:00:00	1.08
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29-Sep-20	01:00:00	1.13
29-Sep-20	07:00:00	1.14
29-Sep-20	13:00:00	1.19
29-Sep-20	19:00:00	1.2
30-Sep-20	01:00:00	1.19
30-Sep-20	07:00:00	1.19
30-Sep-20	13:00:00	1.21
30-Sep-20	19:00:00	1.15

Cordinates: 22°50'21.0'86°03'27.5"E

DATE	TIME	WATER LEVEL (m)
01-Apr-20	01:00:00	2.43
01-Apr-20	07:00:00	2.42
01-Apr-20	13:00:00	2.43
01-Apr-20	19:00:00	2.44
02-Apr-20	01:00:00	2.44
02-Apr-20	07:00:00	2.43
02-Apr-20	13:00:00	2.39
02-Apr-20	19:00:00	2.37
03-Apr-20	01:00:00	2.38
03-Apr-20	07:00:00	2.44
03-Apr-20	13:00:00	2.4
03-Apr-20	19:00:00	2.36
04-Apr-20	01:00:00	2.36
04-Apr-20	07:00:00	2.41
04-Apr-20	13:00:00	2.43
04-Apr-20	19:00:00	2.42
05-Apr-20	01:00:00	2.39
05-Apr-20	07:00:00	2.4
05-Apr-20	13:00:00	2.4
05-Apr-20	19:00:00	2.4
06-Apr-20	01:00:00	2.39
06-Apr-20	07:00:00	2.4
06-Apr-20	13:00:00	2.41
06-Apr-20	19:00:00	2.4
07-Apr-20	01:00:00	2.42
07-Apr-20	07:00:00	2.42
07-Apr-20	13:00:00	2.4
07-Apr-20	19:00:00	2.4
08-Apr-20	01:00:00	2.36
08-Apr-20	07:00:00	2.36
08-Apr-20	13:00:00	2.41
08-Apr-20	19:00:00	2.4
09-Apr-20	01:00:00	2.41
09-Apr-20	07:00:00	2.41
09-Apr-20	13:00:00	2.44
09-Apr-20	19:00:00	2.43
10-Apr-20	01:00:00	2.44
10-Apr-20	07:00:00	2.41
10-Apr-20	13:00:00	2.41
10-Apr-20	19:00:00	2.41
11-Apr-20	01:00:00	2.37
11-Apr-20	07:00:00	2.36
11-Apr-20	13:00:00	2.36
11-Apr-20	19:00:00	2.37
12-Apr-20	01:00:00	2.37
12-Apr-20	07:00:00	2.36
12-Apr-20	13:00:00	2.36
12-Apr-20	19:00:00	2.37

13-Apr-20	01:00:00	2.36
13-Apr-20	07:00:00	2.36
13-Apr-20	13:00:00	2.38
13-Apr-20	19:00:00	2.38
14-Apr-20	01:00:00	2.39
14-Apr-20	07:00:00	2.4
14-Apr-20	13:00:00	2.38
14-Apr-20	19:00:00	2.4
15-Apr-20	01:00:00	2.41
15-Apr-20	07:00:00	2.41
15-Apr-20	13:00:00	2.42
15-Apr-20	19:00:00	2.4
16-Apr-20	01:00:00	2.38
16-Apr-20	07:00:00	2.35
16-Apr-20	13:00:00	2.34
16-Apr-20	19:00:00	2.34
17-Apr-20	01:00:00	2.35
17-Apr-20	07:00:00	2.34
17-Apr-20	13:00:00	2.34
17-Apr-20	19:00:00	2.34
18-Apr-20	01:00:00	2.32
18-Apr-20	07:00:00	2.33
18-Apr-20	13:00:00	2.33
18-Apr-20	19:00:00	2.34
19-Apr-20	01:00:00	2.33
19-Apr-20	07:00:00	2.33
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19-Apr-20	19:00:00	2.34
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20-Apr-20	19:00:00	2.39
21-Apr-20	01:00:00	2.39
21-Apr-20	07:00:00	2.4
21-Apr-20	13:00:00	2.41
21-Apr-20	19:00:00	2.39
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22-Apr-20	13:00:00	2.34
22-Apr-20	19:00:00	2.32
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23-Apr-20	07:00:00	2.3
23-Apr-20	13:00:00	2.31
23-Apr-20	19:00:00	2.31
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24-Apr-20	13:00:00	2.31
24-Apr-20	19:00:00	2.31
25-Apr-20	01:00:00	2.3
25-Apr-20	07:00:00	2.27

25-Apr-20	13:00:00	2.3
25-Apr-20	19:00:00	2.31
26-Apr-20	01:00:00	2.34
26-Apr-20	07:00:00	2.32
26-Apr-20	13:00:00	2.34
26-Apr-20	19:00:00	2.34
27-Apr-20	01:00:00	2.35
27-Apr-20	07:00:00	2.39
27-Apr-20	13:00:00	2.36
27-Apr-20	19:00:00	2.33
28-Apr-20	01:00:00	2.32
28-Apr-20	07:00:00	2.3
28-Apr-20	13:00:00	2.28
28-Apr-20	19:00:00	2.28
29-Apr-20	01:00:00	2.27
29-Apr-20	07:00:00	2.28
29-Apr-20	13:00:00	2.27
29-Apr-20	19:00:00	2.28
30-Apr-20	01:00:00	2.29
30-Apr-20	07:00:00	2.26
30-Apr-20	13:00:00	2.26
30-Apr-20	19:00:00	2.26
01-May-20	01:00:00	2.23
01-May-20	07:00:00	2.23
01-May-20	13:00:00	2.25
01-May-20	19:00:00	2.27
02-May-20	01:00:00	2.28
02-May-20	07:00:00	2.28
02-May-20	13:00:00	2.28
02-May-20	19:00:00	2.31
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03-May-20	07:00:00	2.33
03-May-20	13:00:00	2.32
03-May-20	19:00:00	2.31
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04-May-20	13:00:00	2.26
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05-May-20	07:00:00	2.22
05-May-20	13:00:00	2.23
05-May-20	19:00:00	2.23
06-May-20	01:00:00	2.22
06-May-20	07:00:00	2.22
06-May-20	13:00:00	2.22
06-May-20	19:00:00	2.22
07-May-20	01:00:00	2.22
07-May-20	07:00:00	2.21
07-May-20	13:00:00	2.21
07-May-20	19:00:00	2.21

08-May-20	01:00:00	2.23
08-May-20	07:00:00	2.22
08-May-20	13:00:00	2.26
08-May-20	19:00:00	2.27
09-May-20	01:00:00	2.28
09-May-20	07:00:00	2.32
09-May-20	13:00:00	2.25
09-May-20	19:00:00	2.22
10-May-20	01:00:00	2.22
10-May-20	07:00:00	2.21
10-May-20	13:00:00	2.22
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11-May-20	19:00:00	2.22
12-May-20	01:00:00	2.21
12-May-20	07:00:00	2.22
12-May-20	13:00:00	2.22
12-May-20	19:00:00	2.21
13-May-20	01:00:00	2.21
13-May-20	07:00:00	2.2
13-May-20	13:00:00	2.2
13-May-20	19:00:00	2.21
14-May-20	01:00:00	2.22
14-May-20	07:00:00	2.22
14-May-20	13:00:00	2.23
14-May-20	19:00:00	2.23
15-May-20	01:00:00	2.23
15-May-20	07:00:00	2.21
15-May-20	13:00:00	2.2
15-May-20	19:00:00	2.26
16-May-20	01:00:00	2.26
16-May-20	07:00:00	2.23
16-May-20	13:00:00	2.22
16-May-20	19:00:00	2.21
17-May-20	01:00:00	2.21
17-May-20	07:00:00	2.21
17-May-20	13:00:00	2.22
17-May-20	19:00:00	2.23
18-May-20	01:00:00	2.23
18-May-20	07:00:00	2.22
18-May-20	13:00:00	2.22
18-May-20	19:00:00	2.22
19-May-20	01:00:00	2.22
19-May-20	07:00:00	2.22
19-May-20	13:00:00	2.19
19-May-20	19:00:00	2.21
20-May-20	01:00:00	2.22
20-May-20	07:00:00	2.22

20-May-20	13:00:00	2.23
20-May-20	19:00:00	2.24
21-May-20	01:00:00	2.26
21-May-20	07:00:00	2.27
21-May-20	13:00:00	2.26
21-May-20	19:00:00	2.27
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22-May-20	13:00:00	2.22
22-May-20	19:00:00	2.22
23-May-20	01:00:00	2.21
23-May-20	07:00:00	2.22
23-May-20	13:00:00	2.23
23-May-20	19:00:00	2.22
24-May-20	01:00:00	2.23
24-May-20	07:00:00	2.23
24-May-20	13:00:00	2.24
24-May-20	19:00:00	2.24
25-May-20	01:00:00	2.24
25-May-20	07:00:00	2.24
25-May-20	13:00:00	2.26
25-May-20	19:00:00	2.27
26-May-20	01:00:00	2.31
26-May-20	07:00:00	2.33
26-May-20	13:00:00	2.35
26-May-20	19:00:00	2.4
27-May-20	01:00:00	2.4
27-May-20	07:00:00	2.4
27-May-20	13:00:00	2.4
27-May-20	19:00:00	2.38
28-May-20	01:00:00	2.34
28-May-20	07:00:00	2.34
28-May-20	13:00:00	2.34
28-May-20	19:00:00	2.34
29-May-20	01:00:00	2.33
29-May-20	07:00:00	2.33
29-May-20	13:00:00	2.34
29-May-20	19:00:00	2.34
30-May-20	01:00:00	2.34
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31-May-20	07:00:00	2.32
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31-May-20	19:00:00	2.32
01-Jun-20	01:00:00	2.32
01-Jun-20	07:00:00	2.32
01-Jun-20	13:00:00	2.33
01-Jun-20	19:00:00	2.34

02-Jun-20	01:00:00	2.35
02-Jun-20	07:00:00	2.35
02-Jun-20	13:00:00	2.39
02-Jun-20	19:00:00	2.37
03-Jun-20	01:00:00	2.34
03-Jun-20	07:00:00	2.34
03-Jun-20	13:00:00	2.33
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04-Jun-20	07:00:00	2.28
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04-Jun-20	19:00:00	2.3
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05-Jun-20	07:00:00	2.3
05-Jun-20	13:00:00	2.3
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06-Jun-20	01:00:00	2.3
06-Jun-20	07:00:00	2.29
06-Jun-20	13:00:00	2.29
06-Jun-20	19:00:00	2.29
07-Jun-20	01:00:00	2.3
07-Jun-20	07:00:00	2.3
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09-Jun-20	07:00:00	2.28
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09-Jun-20	19:00:00	2.26
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11-Jun-20	07:00:00	2.23
11-Jun-20	13:00:00	2.24
11-Jun-20	19:00:00	2.24
12-Jun-20	01:00:00	2.24
12-Jun-20	07:00:00	2.23
12-Jun-20	13:00:00	2.23
12-Jun-20	19:00:00	2.24
13-Jun-20	01:00:00	2.23
13-Jun-20	07:00:00	2.24
13-Jun-20	13:00:00	2.25
13-Jun-20	19:00:00	2.29
14-Jun-20	01:00:00	2.3
14-Jun-20	07:00:00	2.29

14-Jun-20	13:00:00	2.29
14-Jun-20	19:00:00	2.27
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25-Jun-20	19:00:00	2.32
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09-Jul-20	07:00:00	2.23

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02-Sep-20	19:00:00	2.23
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Cordinates: 22°50'09.4' 86°03'48.1"E

DATE	TIME	WATER LEVEL (m)
01-Apr-20	01:00:00	0.51
01-Apr-20	07:00:00	0.57
01-Apr-20	13:00:00	0.58
01-Apr-20	19:00:00	0.59
02-Apr-20	01:00:00	0.58
02-Apr-20	07:00:00	0.59
02-Apr-20	13:00:00	0.59
02-Apr-20	19:00:00	0.6
03-Apr-20	01:00:00	0.6
03-Apr-20	07:00:00	0.6
03-Apr-20	13:00:00	0.61
03-Apr-20	19:00:00	0.62
04-Apr-20	01:00:00	0.63
04-Apr-20	07:00:00	0.63
04-Apr-20	13:00:00	0.64
04-Apr-20	19:00:00	0.61
05-Apr-20	01:00:00	0.68
05-Apr-20	07:00:00	0.66
05-Apr-20	13:00:00	0.64
05-Apr-20	19:00:00	0.64
06-Apr-20	01:00:00	0.62
06-Apr-20	07:00:00	0.62
06-Apr-20	13:00:00	0.62
06-Apr-20	19:00:00	0.6
07-Apr-20	01:00:00	0.61
07-Apr-20	07:00:00	0.61
07-Apr-20	13:00:00	0.61
07-Apr-20	19:00:00	0.62
08-Apr-20	01:00:00	0.62
08-Apr-20	07:00:00	0.61
08-Apr-20	13:00:00	0.6
08-Apr-20	19:00:00	0.61
09-Apr-20	01:00:00	0.62
09-Apr-20	07:00:00	0.62
09-Apr-20	13:00:00	0.63
09-Apr-20	19:00:00	0.63
10-Apr-20	01:00:00	0.68
10-Apr-20	07:00:00	0.68
10-Apr-20	13:00:00	0.69
10-Apr-20	19:00:00	0.69
11-Apr-20	01:00:00	0.68
11-Apr-20	07:00:00	0.65
11-Apr-20	13:00:00	0.65
11-Apr-20	19:00:00	0.67
12-Apr-20	01:00:00	0.67
12-Apr-20	07:00:00	0.66
12-Apr-20	13:00:00	0.65
12-Apr-20	19:00:00	0.64

13-Apr-20	01:00:00	0.65
13-Apr-20	07:00:00	0.65
13-Apr-20	13:00:00	0.63
13-Apr-20	19:00:00	0.63
14-Apr-20	01:00:00	0.64
14-Apr-20	07:00:00	0.64
14-Apr-20	13:00:00	0.64
14-Apr-20	19:00:00	0.64
15-Apr-20	01:00:00	0.65
15-Apr-20	07:00:00	0.68
15-Apr-20	13:00:00	0.65
15-Apr-20	19:00:00	0.64
16-Apr-20	01:00:00	0.64
16-Apr-20	07:00:00	0.63
16-Apr-20	13:00:00	0.62
16-Apr-20	19:00:00	0.62
17-Apr-20	01:00:00	0.63
17-Apr-20	07:00:00	0.63
17-Apr-20	13:00:00	0.65
17-Apr-20	19:00:00	0.68
18-Apr-20	01:00:00	0.68
18-Apr-20	07:00:00	0.69
18-Apr-20	13:00:00	0.71
18-Apr-20	19:00:00	0.71
19-Apr-20	01:00:00	0.69
19-Apr-20	07:00:00	0.68
19-Apr-20	13:00:00	0.67
19-Apr-20	19:00:00	0.66
20-Apr-20	01:00:00	0.65
20-Apr-20	07:00:00	0.65
20-Apr-20	13:00:00	0.66
20-Apr-20	19:00:00	0.66
21-Apr-20	01:00:00	0.65
21-Apr-20	07:00:00	0.66
21-Apr-20	13:00:00	0.66
21-Apr-20	19:00:00	0.65
22-Apr-20	01:00:00	0.65
22-Apr-20	07:00:00	0.64
22-Apr-20	13:00:00	0.63
22-Apr-20	19:00:00	0.62
23-Apr-20	01:00:00	0.64
23-Apr-20	07:00:00	0.65
23-Apr-20	13:00:00	0.65
23-Apr-20	19:00:00	0.67
24-Apr-20	01:00:00	0.72
24-Apr-20	07:00:00	0.73
24-Apr-20	13:00:00	0.72
24-Apr-20	19:00:00	0.69
25-Apr-20	01:00:00	0.68
25-Apr-20	07:00:00	0.68

25-Apr-20	13:00:00	0.66
25-Apr-20	19:00:00	0.64
26-Apr-20	01:00:00	0.65
26-Apr-20	07:00:00	0.64
26-Apr-20	13:00:00	0.65
26-Apr-20	19:00:00	0.65
27-Apr-20	01:00:00	0.65
27-Apr-20	07:00:00	0.65
27-Apr-20	13:00:00	0.65
27-Apr-20	19:00:00	0.64
28-Apr-20	01:00:00	0.65
28-Apr-20	07:00:00	0.64
28-Apr-20	13:00:00	0.64
28-Apr-20	19:00:00	0.65
29-Apr-20	01:00:00	0.66
29-Apr-20	07:00:00	0.69
29-Apr-20	13:00:00	0.69
29-Apr-20	19:00:00	0.7
30-Apr-20	01:00:00	0.72
30-Apr-20	07:00:00	0.7
30-Apr-20	13:00:00	0.68
30-Apr-20	19:00:00	0.71
01-May-20	01:00:00	0.71
01-May-20	07:00:00	0.69
01-May-20	13:00:00	0.67
01-May-20	19:00:00	0.67
02-May-20	01:00:00	0.66
02-May-20	07:00:00	0.66
02-May-20	13:00:00	0.65
02-May-20	19:00:00	0.66
03-May-20	01:00:00	0.67
03-May-20	07:00:00	0.66
03-May-20	13:00:00	0.66
03-May-20	19:00:00	0.66
04-May-20	01:00:00	0.65
04-May-20	07:00:00	0.65
04-May-20	13:00:00	0.66
04-May-20	19:00:00	0.66
05-May-20	01:00:00	0.65
05-May-20	07:00:00	0.67
05-May-20	13:00:00	0.69
05-May-20	19:00:00	0.69
06-May-20	01:00:00	0.71
06-May-20	07:00:00	0.7
06-May-20	13:00:00	0.72
06-May-20	19:00:00	0.7
07-May-20	01:00:00	0.69
07-May-20	07:00:00	0.68
07-May-20	13:00:00	0.66
07-May-20	19:00:00	0.65

08-May-20	01:00:00	0.62
08-May-20	07:00:00	0.63
08-May-20	13:00:00	0.62
08-May-20	19:00:00	0.63
09-May-20	01:00:00	0.64
09-May-20	07:00:00	0.63
09-May-20	13:00:00	0.64
09-May-20	19:00:00	0.63
10-May-20	01:00:00	0.62
10-May-20	07:00:00	0.61
10-May-20	13:00:00	0.61
10-May-20	19:00:00	0.62
11-May-20	01:00:00	0.65
11-May-20	07:00:00	0.66
11-May-20	13:00:00	0.68
11-May-20	19:00:00	0.67
12-May-20	01:00:00	0.68
12-May-20	07:00:00	0.69
12-May-20	13:00:00	0.68
12-May-20	19:00:00	0.67
13-May-20	01:00:00	0.72
13-May-20	07:00:00	0.7
13-May-20	13:00:00	0.67
13-May-20	19:00:00	0.65
14-May-20	01:00:00	0.65
14-May-20	07:00:00	0.65
14-May-20	13:00:00	0.66
14-May-20	19:00:00	0.66
15-May-20	01:00:00	0.67
15-May-20	07:00:00	0.68
15-May-20	13:00:00	0.67
15-May-20	19:00:00	0.67
16-May-20	01:00:00	0.65
16-May-20	07:00:00	0.66
16-May-20	13:00:00	0.66
16-May-20	19:00:00	0.66
17-May-20	01:00:00	0.66
17-May-20	07:00:00	0.68
17-May-20	13:00:00	0.7
17-May-20	19:00:00	0.71
18-May-20	01:00:00	0.7
18-May-20	07:00:00	0.7
18-May-20	13:00:00	0.7
18-May-20	19:00:00	0.71
19-May-20	01:00:00	0.71
19-May-20	07:00:00	0.69
19-May-20	13:00:00	0.69
19-May-20	19:00:00	0.69
20-May-20	01:00:00	0.69
20-May-20	07:00:00	0.7

20-May-20	13:00:00	0.71
20-May-20	19:00:00	0.72
21-May-20	01:00:00	0.72
21-May-20	07:00:00	0.71
21-May-20	13:00:00	0.72
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22-May-20	01:00:00	0.72
22-May-20	07:00:00	0.71
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22-May-20	19:00:00	0.72
23-May-20	01:00:00	0.72
23-May-20	07:00:00	0.72
23-May-20	13:00:00	0.73
23-May-20	19:00:00	0.73
24-May-20	01:00:00	0.75
24-May-20	07:00:00	0.8
24-May-20	13:00:00	0.83
24-May-20	19:00:00	0.83
25-May-20	01:00:00	0.83
25-May-20	07:00:00	0.81
25-May-20	13:00:00	0.75
25-May-20	19:00:00	0.73
26-May-20	01:00:00	0.72
26-May-20	07:00:00	0.72
26-May-20	13:00:00	0.72
26-May-20	19:00:00	0.74
27-May-20	01:00:00	0.74
27-May-20	07:00:00	0.74
27-May-20	13:00:00	0.73
27-May-20	19:00:00	0.73
28-May-20	01:00:00	0.73
28-May-20	07:00:00	0.72
28-May-20	13:00:00	0.72
28-May-20	19:00:00	0.72
29-May-20	01:00:00	0.72
29-May-20	07:00:00	0.73
29-May-20	13:00:00	0.74
29-May-20	19:00:00	0.74
30-May-20	01:00:00	0.77
30-May-20	07:00:00	0.78
30-May-20	13:00:00	0.78
30-May-20	19:00:00	0.8
31-May-20	01:00:00	0.82
31-May-20	07:00:00	0.81
31-May-20	13:00:00	0.76
31-May-20	19:00:00	0.73
01-Jun-20	01:00:00	0.72
01-Jun-20	07:00:00	0.71
01-Jun-20	13:00:00	0.71
01-Jun-20	19:00:00	0.71

02-Jun-20	01:00:00	0.7
02-Jun-20	07:00:00	0.71
02-Jun-20	13:00:00	0.71
02-Jun-20	19:00:00	0.71
03-Jun-20	01:00:00	0.71
03-Jun-20	07:00:00	0.71
03-Jun-20	13:00:00	0.71
03-Jun-20	19:00:00	0.71
04-Jun-20	01:00:00	0.71
04-Jun-20	07:00:00	0.73
04-Jun-20	13:00:00	0.73
04-Jun-20	19:00:00	0.74
05-Jun-20	01:00:00	0.74
05-Jun-20	07:00:00	0.74
05-Jun-20	13:00:00	0.73
05-Jun-20	19:00:00	0.73
06-Jun-20	01:00:00	0.75
06-Jun-20	07:00:00	0.74
06-Jun-20	13:00:00	0.73
06-Jun-20	19:00:00	0.73
07-Jun-20	01:00:00	0.69
07-Jun-20	07:00:00	0.68
07-Jun-20	13:00:00	0.69
07-Jun-20	19:00:00	0.7
08-Jun-20	01:00:00	0.7
08-Jun-20	07:00:00	0.7
08-Jun-20	13:00:00	0.69
08-Jun-20	19:00:00	0.69
09-Jun-20	01:00:00	0.67
09-Jun-20	07:00:00	0.66
09-Jun-20	13:00:00	0.68
09-Jun-20	19:00:00	0.68
10-Jun-20	01:00:00	0.7
10-Jun-20	07:00:00	0.7
10-Jun-20	13:00:00	0.72
10-Jun-20	19:00:00	0.73
11-Jun-20	01:00:00	0.75
11-Jun-20	07:00:00	0.75
11-Jun-20	13:00:00	0.74
11-Jun-20	19:00:00	0.72
12-Jun-20	01:00:00	0.76
12-Jun-20	07:00:00	0.81
12-Jun-20	13:00:00	0.8
12-Jun-20	19:00:00	0.76
13-Jun-20	01:00:00	0.74
13-Jun-20	07:00:00	0.71
13-Jun-20	13:00:00	0.71
13-Jun-20	19:00:00	0.71
14-Jun-20	01:00:00	0.71
14-Jun-20	07:00:00	0.73

14-Jun-20	13:00:00	0.72
14-Jun-20	19:00:00	0.72
15-Jun-20	01:00:00	0.71
15-Jun-20	07:00:00	0.7
15-Jun-20	13:00:00	0.71
15-Jun-20	19:00:00	0.7
16-Jun-20	01:00:00	0.71
16-Jun-20	07:00:00	0.74
16-Jun-20	13:00:00	0.76
16-Jun-20	19:00:00	0.81
17-Jun-20	01:00:00	0.81
17-Jun-20	07:00:00	0.77
17-Jun-20	13:00:00	0.78
17-Jun-20	19:00:00	0.76
18-Jun-20	01:00:00	0.74
18-Jun-20	07:00:00	0.75
18-Jun-20	13:00:00	0.75
18-Jun-20	19:00:00	0.74
19-Jun-20	01:00:00	0.74
19-Jun-20	07:00:00	0.72
19-Jun-20	13:00:00	0.73
19-Jun-20	19:00:00	0.73
20-Jun-20	01:00:00	0.74
20-Jun-20	07:00:00	0.74
20-Jun-20	13:00:00	0.74
20-Jun-20	19:00:00	0.72
21-Jun-20	01:00:00	0.72
21-Jun-20	07:00:00	0.71
21-Jun-20	13:00:00	0.71
21-Jun-20	19:00:00	0.71
22-Jun-20	01:00:00	0.71
22-Jun-20	07:00:00	0.73
22-Jun-20	13:00:00	0.75
22-Jun-20	19:00:00	0.75
23-Jun-20	01:00:00	0.75
23-Jun-20	07:00:00	0.77
23-Jun-20	13:00:00	0.79
23-Jun-20	19:00:00	0.74
24-Jun-20	01:00:00	0.73
24-Jun-20	07:00:00	0.73
24-Jun-20	13:00:00	0.72
24-Jun-20	19:00:00	0.73
25-Jun-20	01:00:00	0.72
25-Jun-20	07:00:00	0.7
25-Jun-20	13:00:00	0.69
25-Jun-20	19:00:00	0.7
26-Jun-20	01:00:00	0.7
26-Jun-20	07:00:00	0.7
26-Jun-20	13:00:00	0.7
26-Jun-20	19:00:00	0.7

27-Jun-20	01:00:00	0.7
27-Jun-20	07:00:00	0.7
27-Jun-20	13:00:00	0.7
27-Jun-20	19:00:00	0.71
28-Jun-20	01:00:00	0.71
28-Jun-20	07:00:00	0.73
28-Jun-20	13:00:00	0.74
28-Jun-20	19:00:00	0.75
29-Jun-20	01:00:00	0.79
29-Jun-20	07:00:00	0.76
29-Jun-20	13:00:00	0.74
29-Jun-20	19:00:00	0.73
30-Jun-20	01:00:00	0.73
30-Jun-20	07:00:00	0.73
30-Jun-20	13:00:00	0.72
30-Jun-20	19:00:00	0.71
01-Jul-20	01:00:00	0.7
01-Jul-20	07:00:00	0.69
01-Jul-20	13:00:00	0.69
01-Jul-20	19:00:00	0.69
02-Jul-20	01:00:00	0.69
02-Jul-20	07:00:00	0.69
02-Jul-20	13:00:00	0.7
02-Jul-20	19:00:00	0.7
03-Jul-20	01:00:00	0.69
03-Jul-20	07:00:00	0.69
03-Jul-20	13:00:00	0.68
03-Jul-20	19:00:00	0.69
04-Jul-20	01:00:00	0.7
04-Jul-20	07:00:00	0.71
04-Jul-20	13:00:00	0.71
04-Jul-20	19:00:00	0.72
05-Jul-20	01:00:00	0.73
05-Jul-20	07:00:00	0.73
05-Jul-20	13:00:00	0.74
05-Jul-20	19:00:00	0.73
06-Jul-20	01:00:00	0.73
06-Jul-20	07:00:00	0.72
06-Jul-20	13:00:00	0.71
06-Jul-20	19:00:00	0.69
07-Jul-20	01:00:00	0.7
07-Jul-20	07:00:00	0.7
07-Jul-20	13:00:00	0.7
07-Jul-20	19:00:00	0.71
08-Jul-20	01:00:00	0.71
08-Jul-20	07:00:00	0.71
08-Jul-20	13:00:00	0.71
08-Jul-20	19:00:00	0.7
09-Jul-20	01:00:00	0.7
09-Jul-20	07:00:00	0.69

09-Jul-20	13:00:00	0.69
09-Jul-20	19:00:00	0.69
10-Jul-20	01:00:00	0.71
10-Jul-20	07:00:00	0.72
10-Jul-20	13:00:00	0.73
10-Jul-20	19:00:00	0.73
11-Jul-20	01:00:00	0.74
11-Jul-20	07:00:00	0.73
11-Jul-20	13:00:00	0.75
11-Jul-20	19:00:00	0.73
12-Jul-20	01:00:00	0.73
12-Jul-20	07:00:00	0.73
12-Jul-20	13:00:00	0.72
12-Jul-20	19:00:00	0.71
13-Jul-20	01:00:00	0.7
13-Jul-20	07:00:00	0.7
13-Jul-20	13:00:00	0.7
13-Jul-20	19:00:00	0.7
14-Jul-20	01:00:00	0.71
14-Jul-20	07:00:00	0.7
14-Jul-20	13:00:00	0.7
14-Jul-20	19:00:00	0.7
15-Jul-20	01:00:00	0.7
15-Jul-20	07:00:00	0.7
15-Jul-20	13:00:00	0.7
15-Jul-20	19:00:00	0.71
16-Jul-20	01:00:00	0.72
16-Jul-20	07:00:00	0.73
16-Jul-20	13:00:00	0.73
16-Jul-20	19:00:00	0.74
17-Jul-20	01:00:00	0.73
17-Jul-20	07:00:00	0.74
17-Jul-20	13:00:00	0.74
17-Jul-20	19:00:00	0.73
18-Jul-20	01:00:00	0.73
18-Jul-20	07:00:00	0.71
18-Jul-20	13:00:00	0.72
18-Jul-20	19:00:00	0.71
19-Jul-20	01:00:00	0.71
19-Jul-20	07:00:00	0.7
19-Jul-20	13:00:00	0.69
19-Jul-20	19:00:00	0.69
20-Jul-20	01:00:00	0.7
20-Jul-20	07:00:00	0.7
20-Jul-20	13:00:00	0.7
20-Jul-20	19:00:00	0.7
21-Jul-20	01:00:00	0.7
21-Jul-20	07:00:00	0.7
21-Jul-20	13:00:00	0.7
21-Jul-20	19:00:00	0.71

22-Jul-20	01:00:00	0.71
22-Jul-20	07:00:00	0.72
22-Jul-20	13:00:00	0.74
22-Jul-20	19:00:00	0.74
23-Jul-20	01:00:00	0.75
23-Jul-20	07:00:00	0.77
23-Jul-20	13:00:00	0.74
23-Jul-20	19:00:00	0.74
24-Jul-20	01:00:00	0.74
24-Jul-20	07:00:00	0.73
24-Jul-20	13:00:00	0.73
24-Jul-20	19:00:00	0.72
25-Jul-20	01:00:00	0.71
25-Jul-20	07:00:00	0.7
25-Jul-20	13:00:00	0.7
25-Jul-20	19:00:00	0.7
26-Jul-20	01:00:00	0.71
26-Jul-20	07:00:00	0.71
26-Jul-20	13:00:00	0.7
26-Jul-20	19:00:00	0.7
27-Jul-20	01:00:00	0.7
27-Jul-20	07:00:00	0.69
27-Jul-20	13:00:00	0.69
27-Jul-20	19:00:00	0.7
28-Jul-20	01:00:00	0.71
28-Jul-20	07:00:00	0.73
28-Jul-20	13:00:00	0.75
28-Jul-20	19:00:00	0.75
29-Jul-20	01:00:00	0.75
29-Jul-20	07:00:00	0.74
29-Jul-20	13:00:00	0.74
29-Jul-20	19:00:00	0.73
30-Jul-20	01:00:00	0.73
30-Jul-20	07:00:00	0.73
30-Jul-20	13:00:00	0.72
30-Jul-20	19:00:00	0.71
31-Jul-20	01:00:00	0.7
31-Jul-20	07:00:00	0.69
31-Jul-20	13:00:00	0.69
31-Jul-20	19:00:00	0.69
01-Aug-20	01:00:00	0.69
01-Aug-20	07:00:00	0.69
01-Aug-20	13:00:00	0.68
01-Aug-20	19:00:00	0.68
02-Aug-20	01:00:00	0.68
02-Aug-20	07:00:00	0.67
02-Aug-20	13:00:00	0.65
02-Aug-20	19:00:00	0.64
03-Aug-20	01:00:00	0.66
03-Aug-20	07:00:00	0.68

03-Aug-20	13:00:00	0.71
03-Aug-20	19:00:00	0.73
04-Aug-20	01:00:00	0.73
04-Aug-20	07:00:00	0.73
04-Aug-20	13:00:00	0.74
04-Aug-20	19:00:00	0.73
05-Aug-20	01:00:00	0.72
05-Aug-20	07:00:00	0.71
05-Aug-20	13:00:00	0.69
05-Aug-20	19:00:00	0.68
06-Aug-20	01:00:00	0.66
06-Aug-20	07:00:00	0.66
06-Aug-20	13:00:00	0.65
06-Aug-20	19:00:00	0.67
07-Aug-20	01:00:00	0.67
07-Aug-20	07:00:00	0.67
07-Aug-20	13:00:00	0.67
07-Aug-20	19:00:00	0.67
08-Aug-20	01:00:00	0.67
08-Aug-20	07:00:00	0.67
08-Aug-20	13:00:00	0.67
08-Aug-20	19:00:00	0.68
09-Aug-20	01:00:00	0.69
09-Aug-20	07:00:00	0.7
09-Aug-20	13:00:00	0.71
09-Aug-20	19:00:00	0.72
10-Aug-20	01:00:00	0.72
10-Aug-20	07:00:00	0.73
10-Aug-20	13:00:00	0.74
10-Aug-20	19:00:00	0.74
11-Aug-20	01:00:00	0.71
11-Aug-20	07:00:00	0.71
11-Aug-20	13:00:00	0.7
11-Aug-20	19:00:00	0.69
12-Aug-20	01:00:00	0.69
12-Aug-20	07:00:00	0.69
12-Aug-20	13:00:00	0.69
12-Aug-20	19:00:00	0.7
13-Aug-20	01:00:00	0.7
13-Aug-20	07:00:00	0.71
13-Aug-20	13:00:00	0.72
13-Aug-20	19:00:00	0.74
14-Aug-20	01:00:00	0.73
14-Aug-20	07:00:00	0.74
14-Aug-20	13:00:00	0.74
14-Aug-20	19:00:00	0.74
15-Aug-20	01:00:00	0.75
15-Aug-20	07:00:00	0.78
15-Aug-20	13:00:00	0.81
15-Aug-20	19:00:00	0.83

16-Aug-20	01:00:00	0.81
16-Aug-20	07:00:00	0.81
16-Aug-20	13:00:00	0.83
16-Aug-20	19:00:00	0.85
17-Aug-20	01:00:00	0.84
17-Aug-20	07:00:00	0.82
17-Aug-20	13:00:00	0.77
17-Aug-20	19:00:00	0.75
18-Aug-20	01:00:00	0.75
18-Aug-20	07:00:00	0.75
18-Aug-20	13:00:00	0.75
18-Aug-20	19:00:00	0.75
19-Aug-20	01:00:00	0.75
19-Aug-20	07:00:00	0.75
19-Aug-20	13:00:00	0.74
19-Aug-20	19:00:00	0.74
20-Aug-20	01:00:00	0.73
20-Aug-20	07:00:00	0.72
20-Aug-20	13:00:00	0.72
20-Aug-20	19:00:00	0.73
21-Aug-20	01:00:00	0.73
21-Aug-20	07:00:00	0.73
21-Aug-20	13:00:00	0.77
21-Aug-20	19:00:00	0.83
22-Aug-20	01:00:00	0.84
22-Aug-20	07:00:00	0.82
22-Aug-20	13:00:00	0.8
22-Aug-20	19:00:00	0.83
23-Aug-20	01:00:00	0.85
23-Aug-20	07:00:00	0.84
23-Aug-20	13:00:00	0.82
23-Aug-20	19:00:00	0.78
24-Aug-20	01:00:00	0.75
24-Aug-20	07:00:00	0.75
24-Aug-20	13:00:00	0.74
24-Aug-20	19:00:00	0.75
25-Aug-20	01:00:00	0.75
25-Aug-20	07:00:00	0.74
25-Aug-20	13:00:00	0.75
25-Aug-20	19:00:00	0.74
26-Aug-20	01:00:00	0.74
26-Aug-20	07:00:00	0.74
26-Aug-20	13:00:00	0.74
26-Aug-20	19:00:00	0.74
27-Aug-20	01:00:00	0.75
27-Aug-20	07:00:00	0.74
27-Aug-20	13:00:00	0.75
27-Aug-20	19:00:00	0.76
28-Aug-20	01:00:00	0.75
28-Aug-20	07:00:00	0.75

28-Aug-20	13:00:00	0.74
28-Aug-20	19:00:00	0.8
29-Aug-20	01:00:00	0.82
29-Aug-20	07:00:00	0.81
29-Aug-20	13:00:00	0.79
29-Aug-20	19:00:00	0.75
30-Aug-20	01:00:00	0.73
30-Aug-20	07:00:00	0.73
30-Aug-20	13:00:00	0.71
30-Aug-20	19:00:00	0.71
31-Aug-20	01:00:00	0.7
31-Aug-20	07:00:00	0.72
31-Aug-20	13:00:00	0.71
31-Aug-20	19:00:00	0.69
01-Sep-20	01:00:00	0.73
01-Sep-20	07:00:00	0.74
01-Sep-20	13:00:00	0.74
01-Sep-20	19:00:00	0.74
02-Sep-20	01:00:00	0.76
02-Sep-20	07:00:00	0.78
02-Sep-20	13:00:00	0.78
02-Sep-20	19:00:00	0.78
03-Sep-20	01:00:00	0.78
03-Sep-20	07:00:00	0.76
03-Sep-20	13:00:00	0.75
03-Sep-20	19:00:00	0.8
04-Sep-20	01:00:00	0.73
04-Sep-20	07:00:00	0.76
04-Sep-20	13:00:00	0.74
04-Sep-20	19:00:00	0.72
05-Sep-20	01:00:00	0.69
05-Sep-20	07:00:00	0.68
05-Sep-20	13:00:00	0.68
05-Sep-20	19:00:00	0.69
06-Sep-20	01:00:00	0.69
06-Sep-20	07:00:00	0.68
06-Sep-20	13:00:00	0.69
06-Sep-20	19:00:00	0.69
07-Sep-20	01:00:00	0.68
07-Sep-20	07:00:00	0.68
07-Sep-20	13:00:00	0.69
07-Sep-20	19:00:00	0.7
08-Sep-20	01:00:00	0.71
08-Sep-20	07:00:00	0.73
08-Sep-20	13:00:00	0.74
08-Sep-20	19:00:00	0.75
09-Sep-20	01:00:00	0.75
09-Sep-20	07:00:00	0.74
09-Sep-20	13:00:00	0.74
09-Sep-20	19:00:00	0.74

10-Sep-20	01:00:00	0.72
10-Sep-20	07:00:00	0.71
10-Sep-20	13:00:00	0.69
10-Sep-20	19:00:00	0.68
11-Sep-20	01:00:00	0.68
11-Sep-20	07:00:00	0.69
11-Sep-20	13:00:00	0.67
11-Sep-20	19:00:00	0.68
12-Sep-20	01:00:00	0.67
12-Sep-20	07:00:00	0.67
12-Sep-20	13:00:00	0.67
12-Sep-20	19:00:00	0.67
13-Sep-20	01:00:00	0.67
13-Sep-20	07:00:00	0.68
13-Sep-20	13:00:00	0.69
13-Sep-20	19:00:00	0.71
14-Sep-20	01:00:00	0.73
14-Sep-20	07:00:00	0.73
14-Sep-20	13:00:00	0.73
14-Sep-20	19:00:00	0.73
15-Sep-20	01:00:00	0.73
15-Sep-20	07:00:00	0.72
15-Sep-20	13:00:00	0.72
15-Sep-20	19:00:00	0.72
16-Sep-20	01:00:00	0.72
16-Sep-20	07:00:00	0.69
16-Sep-20	13:00:00	0.68
16-Sep-20	19:00:00	0.68
17-Sep-20	01:00:00	0.68
17-Sep-20	07:00:00	0.69
17-Sep-20	13:00:00	0.68
17-Sep-20	19:00:00	0.69
18-Sep-20	01:00:00	0.68
18-Sep-20	07:00:00	0.68
18-Sep-20	13:00:00	0.68
18-Sep-20	19:00:00	0.68
19-Sep-20	01:00:00	0.68
19-Sep-20	07:00:00	0.68
19-Sep-20	13:00:00	0.69
19-Sep-20	19:00:00	0.7
20-Sep-20	01:00:00	0.72
20-Sep-20	07:00:00	0.73
20-Sep-20	13:00:00	0.72
20-Sep-20	19:00:00	0.71
21-Sep-20	01:00:00	0.71
21-Sep-20	07:00:00	0.7
21-Sep-20	13:00:00	0.69
21-Sep-20	19:00:00	0.68
22-Sep-20	01:00:00	0.68
22-Sep-20	07:00:00	0.68

22-Sep-20	13:00:00	0.66
22-Sep-20	19:00:00	0.65
23-Sep-20	01:00:00	0.65
23-Sep-20	07:00:00	0.66
23-Sep-20	13:00:00	0.66
23-Sep-20	19:00:00	0.66
24-Sep-20	01:00:00	0.65
24-Sep-20	07:00:00	0.65
24-Sep-20	13:00:00	0.65
24-Sep-20	19:00:00	0.65
25-Sep-20	01:00:00	0.66
25-Sep-20	07:00:00	0.66
25-Sep-20	13:00:00	0.68
25-Sep-20	19:00:00	0.7
26-Sep-20	01:00:00	0.73
26-Sep-20	07:00:00	0.73
26-Sep-20	13:00:00	0.72
26-Sep-20	19:00:00	0.7
27-Sep-20	01:00:00	0.72
27-Sep-20	07:00:00	0.7
27-Sep-20	13:00:00	0.69
27-Sep-20	19:00:00	0.68
28-Sep-20	01:00:00	0.65
28-Sep-20	07:00:00	0.64
28-Sep-20	13:00:00	0.64
28-Sep-20	19:00:00	0.64
29-Sep-20	01:00:00	0.65
29-Sep-20	07:00:00	0.65
29-Sep-20	13:00:00	0.65
29-Sep-20	19:00:00	0.64
30-Sep-20	01:00:00	0.64
30-Sep-20	07:00:00	0.64
30-Sep-20	13:00:00	0.63
30-Sep-20	19:00:00	0.6



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Certificate No. - TC 7813

ANALYTICAL TEST REPORT

Water Test Report		URL (Unique Lab Report) No.	TC78132010000065P
Date of Issue	30 th September 2020	Report ID	YBAEEL-200304-132814 - SW03
Sample Description	Surface Water	Job code / Ref. no.	YBAEEL/WA/LC/Sep.-2013
Type of Industries	Thermal Power Plant	Work Order No. / Date	3030004681 - 18/02/2020
Issued to: -	M/s Adhunik Power & Natural Resources Limited (Unit -1) Vill.- Padampur, Behind PGCIL Sub-station, Jamshedpur-832105, Jharkhand.		

Sampling date	26/09/2020	Mode of sample Collection	By YBAEEL Team		
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003	Sample Code	200927 – SW – E01		
Sampling Location	Shrirampur Village	Sampling Source	Surface Water		
Sample pkg. Condition	Sealed Pack in PP Bottle	Sample Quantity	4000 ml		
Meteorological cond.	W.C. – Partly Cloudy	RH – 74 %	Temp. – 26 ^o C		
Work allotted date	27/09/2020	Test started on	27/09/2020	Test completed on	30/09/2020

Test Result

Sl	Parameter	Test Method	Units	Results	Limits
1.	pH value	IS 3025 (P-11):2002	pH	7.07	6.5-8.5
2.	Temperature*	IS 3025 (P-09)	°C	25.7	--
3.	Colour	IS 3025 (P-04):1983	Hazen	30	15, max
4.	Odour*	IS 3025 (P-05):	--	Agree.	Agreeable
5.	Taste*	IS 3025 (P-07):	--	Agree.	Agreeable
6.	Turbidity	IS 3025 (P-10):2002	NTU	8.0	5, max
7.	Alkalinity (as CaCO ₃)	IS 3025 (P-23):2003	mg/l	158.0	600, max
8.	Total Hardness (as CaCO ₃)	IS 3025 (P-21):2009	mg/l	190.0	600, max
9.	Conductivity	IS 3025 (P-14):2013	µs/cm	462.0	--
10.	Total dissolved solids	IS 3025 (P-16):2006	mg/l	307.0	2000, max
11.	Nitrogen (Nitrite)	IS 3025 (P-34):1988	mg/l	0.36	--
12.	Chlorine Residual	IS 3025 (P-26):2003	mg/l	ND (DL 0.07)	1, max
13.	Chloride (as Cl ⁻)	IS 3025 (P-32):2003	mg/l	22.1	1000, max
14.	Fluoride (as F ⁻)	APHA 4500 F-C 23 rd edition 2017	mg/l	0.5	1.5, max
15.	Nitrate (as NO ₃ ⁻)	APHA 4500 NO ₃ ⁻ (B) 23 rd edition 2017	mg/l	0.56	45, max
16.	Aluminium (as Al ⁺)	IS 3025 (P-55)	mg/l	ND (DL 0.03)	0.03-0.2
17.	Arsenic (as As)	APHA 3114 B 23 rd edition 2017	mg/l	ND (DL 0.01)	0.01-0.05
18.	Calcium (as CaCO ₃)	IS 3025 (P-40): 2003	mg/l	53.6	200, max
19.	Chromium (as Cr)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.05)	0.05, max
20.	Copper (as Cu)	APHA 3111 B 23 rd edition 2017	mg/l	0.02	1.5, max
21.	Iron (as Fe)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.02)	0.3, max
22.	Lead (as Pb)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.01)	0.01, max
23.	Magnesium (as CaCO ₃)	IS 3025 (P-46):2003	mg/l	13.6	100, max
24.	Potassium (as K ⁺)	APHA 3111 B 23 rd edition 2017	mg/l	4.95	--
25.	Sodium (as Na ⁺)	APHA 3111 B 23 rd edition 2017	mg/l	31.1	--
26.	Zinc (as Zn)	APHA 3111 B 23 rd edition 2017	mg/l	0.03	15, max
27.	Cadmium (as Cd)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.001)	0.003, max

Tested by Prem Kumar	Checked by Mukesh Kumar	Issued by Umesh Das
Lab Analyst	Incharge - Water Section	Technical Manager



Branch Office : - Jamshedpur Dhanbad Hazaribagh
Main Office : Namkum Post Office, Sidroul, Ranchi
Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in

Authorized Signatory

Chemical Section

Yugantar Bharati Analytical & Environmental Engineering Laboratory

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Certificate No. - TC 7813

ANALYTICAL TEST REPORT

Water Test Report		URL (Unique Lab Report) No.	TC78132010000065P
Date of Issue	30 th September 2020	Report ID	YBAEEL-200304-132814 - SW03
Sample Description	Surface Water	Job code / Ref. no.	YBAEEL/WA/L/C/Sep.-20/13
Type of Industries	Thermal Power Plant	Work Order No. / Date	3030004681 - 18/02/2020
Issued to: -	M/s Adhunik Power & Natural Resources Limited (Unit -1) Vill.- Padampur, Behind PGCIL Sub-station, Jamshedpur-832105, Jharkhand.		

Sampling date	26/09/2020	Mode of sample Collection	By YBAEEL Team		
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003	Sample Code	200927 – SW – E01		
Sampling Location	Shrirampur Village	Sampling Source	Surface Water		
Sample pkg. Condition	Sealed Pack in PP Bottle	Sample Quantity	4000 ml		
Meteorological cond.	W.C. – Partly Cloudy	RH – 74 %	Temp. – 26°C		
Work allotted date	27/09/2020	Test started on	27/09/2020	Test completed on	30/09/2020

Test Result

28.	Sulphate (as SO ₄ ²⁻)	IS 3025 (P-24):2003	mg/l	44.1	400, max
29.	Phosphate (as PO ₄ ³⁻)	IS 3025 (P-31)	mg/l	0.25	--
30.	Nickel (as Ni)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.02)	0.02, max
31.	Cobalt (CO)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.01)	--
32.	Ammonia (free)*	IS 3025 (P-34)	mg/l	ND (DL 0.112)	0.5, max
33.	Mercury (as Hg)	APHA 3112 B 23 rd edition 2017	mg/l	ND (DL 0.001)	0.001, max
34.	Acidity (as CaCO ₃)	IS 3025 (P-22):2003	mg/l	12.0	--

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

Remarks :- Samples Comply with the prescribed Specification as per IS: 10500:2012, except Colour and Turbidity.

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, DL - detectable limit

Tested by	Checked by	Issued by
Prem Kumar	Mukesh Kumar	Umesh Das
Lab Analyst	Incharge - Water Section	Technical Manager

Authorized Signatory

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Chemical Section

Yugantar Bharati Analytical &

Environmental Engineering Laboratory

Branch Office :- Jamshedpur Dhanbad Hazaribag

Main Office : Namkum Post Office, Sidroul, Ranchi - 834001

Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in





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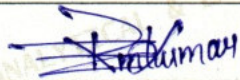
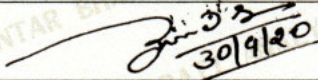
ANALYTICAL TEST REPORT

Water Test Report		URL(Unique Lab Report) No.	TC78132010000066P
Date of Issue	30 th September 2020	Report ID	YBAEEL-200304-132814 -SW04
Sample Description	Surface Water	Job code / Ref. no.	YBAEEL/WA/LC/Sep.-2013
Type of Industries	Thermal Power Plant	Work Order No./ Date	3030004681 - 18/02/2020
Issued to: -	M/s Adhunik Power & Natural Resources Limited (Unit -1) Vill.- Padampur, Behind PGCIL Sub-station, Jamshedpur-832105, Jharkhand.		

Sampling date	26/09/2020	Mode of sample Collection	By YBAEEL Team		
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003	Sample Code	200927 – SW – E02		
Sampling Location	Padampur Village	Sampling Source	Surface Water		
Sample pkg. Condition	Sealed Pack in PP Bottle	Sample Quantity	4000 ml		
Meteorological cond.	W.C. – Partly Cloudy	RH – 74 %	Temp. – 26°C		
Work allotted date	27/09/2020	Test started on	27/09/2020	Test completed on	30/09/2020

Test Result

Sl	Parameter	Test Method	Units	Results	Limits
1.	pH value	IS 3025 (P-11):2002	pH	8.24	6.5-8.5
2.	Temperature*	IS 3025 (P-09)	°C	25.6	--
3.	Colour	IS 3025 (P-04):1983	Hazen	20	15, max
4.	Odour*	IS 3025 (P-05):	--	Agree.	Agreeable
5.	Taste*	IS 3025 (P-07):	--	Agree.	Agreeable
6.	Turbidity	IS 3025 (P-10):2002	NTU	5.0	5, max
7.	Alkalinity (as CaCO ₃)	IS 3025 (P-23):2003	mg/l	166.0	600, max
8.	Total Hardness (as CaCO ₃)	IS 3025 (P-21):2009	mg/l	186.0	600, max
9.	Conductivity	IS 3025 (P-14):2013	µs/cm	775.0	--
10.	Total dissolved solids	IS 3025 (P-16):2006	mg/l	504.0	2000, max
11.	Nitrogen (Nitrite)	IS 3025 (P-34):1988	mg/l	0.99	--
12.	Chlorine Residual	IS 3025 (P-26):2003	mg/l	ND (DL 0.07)	1, max
13.	Chloride (as Cl ⁻)	IS 3025 (P-32):2003	mg/l	45.3	1000, max
14.	Fluoride (as F ⁻)	APHA 4500 F-C 23 rd edition 2017	mg/l	0.2	1.5, max
15.	Nitrate (as NO ₃ ⁻)	APHA 4500 NO ₃ - (B) 23 rd edition 2017	mg/l	0.86	45, max
16.	Aluminium (as Al ⁺)	IS 3025 (P-55)	mg/l	ND (DL 0.03)	0.03-0.2
17.	Arsenic (as As)	APHA 3114 B 23 rd edition 2017	mg/l	ND (DL 0.01)	0.01-0.05
18.	Calcium (as CaCO ₃)	IS 3025 (P-40): 2003	mg/l	44.0	200, max
19.	Chromium (as Cr)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.05)	0.05, max
20.	Copper (as Cu)	APHA 3111 B 23 rd edition 2017	mg/l	0.02	1.5, max
21.	Iron (as Fe)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.02)	0.3, max
22.	Lead (as Pb)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.01)	0.01, max
23.	Magnesium(as CaCO ₃)	IS 3025 (P-46):2003	mg/l	18.4	100, max
24.	Potassium (as K ⁺)	APHA 3111 B 23 rd edition 2017	mg/l	6.81	--
25.	Sodium (as Na ⁺)	APHA 3111 B 23 rd edition 2017	mg/l	31.9	--
26.	Zinc (as Zn)	APHA 3111 B 23 rd edition 2017	mg/l	0.04	15, max
27.	Cadmium (as Cd)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.001)	0.003, max

		
Tested by Prem Kumar Lab Analyst	Checked by Mukesh Kumar Incharge - Water Section	Issued by Umesh Das Technical Manager



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Certificate No. - TC 7813

ANALYTICAL TEST REPORT

Water Test Report		URL (Unique Lab Report) No.	TC78132010000066P
Date of Issue	30 th September 2020	Report ID	YBAEEL-200304-132814 -SW04
Sample Description	Surface Water	Job code / Ref. no.	YBAEEL/WA/L/C/Sep.-20/13
Type of Industries	Thermal Power Plant	Work Order No./ Date	3030004681 - 18/02/2020
Issued to: -	M/s Adhunik Power & Natural Resources Limited (Unit -1) Vill.- Padampur, Behind PGCIL Sub-station, Jamshedpur-832105, Jharkhand.		

Sampling date	26/09/2020	Mode of sample Collection	By YBAEEL Team		
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003	Sample Code	200927 – SW – E02		
Sampling Location	Padampur Village	Sampling Source	Surface Water		
Sample pkg. Condition	Sealed Pack in PP Bottle	Sample Quantity	4000 ml		
Meteorological cond.	W.C. – Partly Cloudy	RH – 74 %	Temp. – 26°C		
Work allotted date	27/09/2020	Test started on	27/09/2020	Test completed on	30/09/2020

Test Result

28.	Sulphate (as SO ₄ ²⁻)	IS 3025 (P-24):2003	mg/l	17.0	400, max
29.	Phosphate (as PO ₄ ³⁻)	IS 3025 (P-31)	mg/l	0.10	--
30.	Nickel (as Ni)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.02)	0.02, max
31.	Cobalt (CO)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.01)	--
32.	Ammonia (free)*	IS 3025 (P-34)	mg/l	ND (DL 0.112)	0.5, max
33.	Mercury (as Hg)	APHA 3112 B 23 rd edition 2017	mg/l	ND (DL 0.001)	0.001, max
34.	Acidity (as CaCO ₃)	IS 3025 (P-22):2003	mg/l	4.0	--

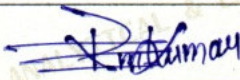
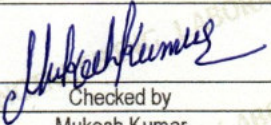
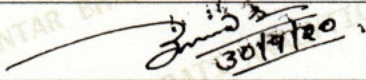
*****End of Test*****

Remarks :-Samples Comply with the prescribed Specification as per IS: 10500:2012, except Colour.

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

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

		
Tested by	Checked by	Issued by
Prem Kumar	Mukesh Kumar	Umesh Das
Lab Analyst	Incharge - Water Section	Technical Manager



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Certificate No. - TC 7813

ANALYTICAL TEST REPORT

Atmospheric Pollution Test Report		URL (Unique Lab Report) No.	TC78132020000304P
Report Release Date	30 th September 2020	Report ID	YBAEEL-200304-132814 - S4
Sample Description	Stationary Source Emission	Job code/ Ref. no.	YBAEEL/WA/L/A/Sep. -20/15
Type of Industry	Power Generation	Work Order No./ Date	3030004681 - 18/02/2020
Issue to	M/s Adhunik Power & Natural Resources Limited (Unit -2) Vill.- Padampur, Behind PGCIL Sub-station, Jamshedpur-832105, Jharkhand.		
Sampling Period	24 th September, 2020	Mode of sample collection	Sampling team of YBAEEL
Sampling Protocol	IS: 11255 & CPCB Guideline (Lats/80/2013-14)		
Meteorological Cond.	W.C.- Cloudy	RH % - 74%	Temp.-23°C
Sample receipt Date	27/09/2020	Analysis Started on	27/09/2020
		Analysis completed on	30/09/2020

General Information

As observed while sampling		As reported by customer	
Location	Sampling port hole	Type of fuel Used	Coal
Platform	Permanent	Quantity of Fuel Used	191 Ton/Hr.
Stack Description (Shape & Material)	Circular / Metal	Total production Capacity	270 MW
Sampling port	Available	Height of Stack from ground level	275mtr.
Stack Identification	Single-Boiler - 02	Inner Diameter of Stack	4.2mtr.
Height of port hole from Ground level	90 mtr.	Pollution Controlling Device	ESP (for PM)

Test Results

Sl	Parameter s	Test Method	Units	Results	Limits
1.	Stack gas Temperature	IS 11255 (Part 3)2008	k	390.83	-
2.	Stack gas Velocity	IS 11255 (Part 3)2008	m/s	26.62	-
3.	Volumetric Flow Rate	IS 11255 (Part 3)2008	Nm ³ /hr	980189.7	-
3.	Particulate Matter (PM)	IS 11255 (Part 1)2009	mg/Nm ³	36.31	50
4.	Sulphure Dioxide (SO ₂)	IS 11255 (Part 2)2009	mg/Nm ³	587.5	600
5.	Oxide of Nitrogen (as NO _x)*	IS 11255 (Part 7)2005 RA 2012	mg/Nm ³	286.2	300
6.	Concentration of CO	IS 13270:1992 (RA 2009)	mg/Nm ³	18.0	-

Emission Rate

1.	Particulate Matter (PM)	IS 11255 (Part 1)2009	Kg/hr	35.59	-
2.	Sulphure Dioxide (SO ₂)	IS 11255 (Part 2)2009	Kg/hr	575.86	-
3.	Oxide of Nitrogen (as NO _x)	IS 11255 (Part 7)2005 RA 2012	Kg/hr	280.50	-

End of Report

Remarks	Samples Comply with the prescribed specification as per 3305(E), 7 th December 2015.	
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit,	
Note	The parameters marked with * are not accredited by NABL.	
Specific contractual notes	All values are expressed in as unit.	
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	The samples collected shall be destroyed after 15 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 Ranchi Jurisdiction	
	Tested by Amit Kumar Sinha Lab Analyst	Verified by Brij Nandan Kumar Section In-charge
		Issued by Umesh Das Technical Manager



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Adhunik Power & Natural Resource Limited

FLY ASH GENERATION & UTILIZATION REPORT (2020-21)

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	Bottom Ash In Reclamation of Low Lying Area
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	APRIL	115606	52.34	60503.94	60503.94	100.0%	1065.52	4096.4	46266.4	9075.59
2	MAY	168525	41.99	70767.29	70767.29	100.0%	13442.08	35367.6	11342.5	10615.1
3	JUNE	142338	47.37	67418.74	67418.7	100.0%	6335.44	43916.6	7053.9	10112.8
4	JULY	176651	45.49	80354.38	80354.38	100.0%	4258.77	52619.5	11423.0	12053.2
5	AUG	196856	43.51	85643.37	85643.4	100.0%	7378.28	39827.5	25591.1	12846.5
6	SEP	182193	41.54	75682.63	75682.6	100.0%	11921.23	35653.5	16755.5	11352.4



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Certificate No. - TC 7813

ANALYTICAL TEST REPORT

Water Test Report		URL (Unique Lab Report) No.	TC78132030000048P
Date of Issue	30 th September 2020	Report ID	YBAEEL-200304-132814 - Soi04
Sample Description	Bottom Ash	Job code / Ref. no.	YBAEEL/WA/L/C/Sep.-20/01
Type of Industries	Power Generation	Work Order No. / Date	3030004681 - 18/02/2020
Issued to: -	M/s Adhunik Power & Natural Resources Limited (Unit -1) Vill.- Padampur, Behind PGCIL Sub-station, Jamshedpur-832105, Jharkhand.		
Sampling date	26/09/2020	Mode of sample Collection	By YBAEEL Team
Sampling Protocol	YBAEEL/SP/01/00	Sample Code	200927 - S - E02
Sampling Location	Hopper	Sampling Source	Bottom Ash
Sample pkg. Condition	Sealed Pack in Zipper Bag	Sample Quantity	2.5 Kg Approx.
Meteorological cond.	W.C. - Partly Cloudy	RH - 74 %	Temp. - 26°C
Work allotted date	27/09/2020	Test started on	27/09/2020
		Test completed on	30/09/2020

Test Result

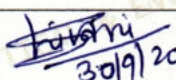
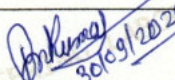
Sl. No.	Tested Parameter	Method	Unit	Result
1.	Arsenic	Method 3111(B) APHA 23 rd Edition, 2017	ppm	0.08
2.	Mercury	Method 3111(B) APHA 23 rd Edition, 2017	ppm	0.04
3.	Chromium	Method 3111(B) APHA 23 rd Edition, 2017	ppm	0.58
4.	Lead	Method 3111(B) APHA 23 rd Edition, 2017	ppm	1.00
5.	Iron	Method 3111(B) APHA 23 rd Edition, 2017	ppm	24.0
6.	Cadmium	Method 3111(B) APHA 23 rd Edition, 2017	ppm	0.07
7.	Copper	Method 3111(B) APHA 23 rd Edition, 2017	ppm	0.13
8.	Nickel	Method 3111(B) APHA 23 rd Edition, 2017	ppm	0.71
9.	Zinc	Method 3111(B) APHA 23 rd Edition, 2017	ppm	0.24
10.	Unborn carbon	%	%	2.4

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

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

 30/9/20	 30/09/2020	 30/9/20
Tested by Shivani Kumari Singh Lab Analyst	Checked by Brij Nandan Kumar In-Charge Pollution & Environment	Issued by Umesh Das Technical Manager



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ANALYTICAL TEST REPORT

Water Test Report		URL(Unique Lab Report) No.	TC78132030000046P
Date of Issue	30 th September 2020	Report ID	YBAEEL-200304-132814 -WW06
Sample Description	Waste Water	Job code / Ref. no.	YBAEEL/WA/L/C/Sep.-20/16
Type of Industries	Power Generation	Work Order No./ Date	3030004681 - 18/02/2020
Issued to: -	M/s Adhunik Power & Natural Resources Limited (Unit -1) Vill.- Padampur, Behind PGCIL Sub-station, Jamshedpur-832105, Jharkhand.		
Sampling date	26/09/2020	Mode of sample Collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003	Sample Code	200927 - WW - E03
Sampling Location	Ash Pond	Sampling Source	Effluent Water
Sample pkg. Condition	Sealed Pack in PP Bottle	Sample Quantity	4000 ml
Meteorological cond.	W.C. - Partly Cloudy	RH - 74 %	Temp. - 36°C
Work allotted date	27/09/2020	Test started on	27/09/2020
		Test completed on	30/09/2020

Test Result

Sl	Parameter	Test Method	Units	Results	Limits
1.	pH value	IS 3025 (P-11):2002	pH	8.8	5.5 - 9.0
2.	Temperature*	IS 3025 (P-09)	°C	29.0	40
3.	Total suspended solids	IS 3025 (P-17):2012	mg/l	90.0	100
4.	Oil and grease	IS 3025 (P-39):2003	mg/l	0.8	10
5.	Arsenic (as As)	APHA 3114 B 23 rd edition 2017	mg/l	ND (DL 0.01)	0.2
6.	Chromium (as Cr)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.05)	0.05
7.	Lead (as Pb)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.01)	0.1
8.	Mercury (as Hg)	APHA 3112 B 23 rd edition 2017	mg/l	ND (DL 0.003)	0.01

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

Remarks :-Samples Comply with the prescribed Specification as per IS:2490:1974, except TSS.

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Tested by	Checked by	Issued by
Shivani Kumari Singh	Brij Nandan Kumar	Umesh Das
Lab Analyst	In-Charge Pollution & Environment	Technical Manager

Authorized Signatory

Pollution & Environment

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Report
on
Corporate Social Responsibilities
(April 2020-Sept 2020)





Introduction:

Adhunik Power & Natural Resources Limited is a 2 x 270 MW coal based thermal power Generating Company. Corporate Social Responsibility (CSR) of Adhunik Power commitment to its stakeholders to conduct business in an economically, socially and environmentally sustainable manner that is transparent and ethical. 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.

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, Barahariharpur, Chotahariharpur, Padampur, Bikanipur, 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 20	18	07	25	Badahariharpur, Dhatkidih, Rapcha, Srirampur, Dumra, Padampur , Kandra, Gamharia, Amdih, Pindrabera
May 20	12	6	18	
June 20	19	11	30	
July20	16	08	24	
Aug20	18	07	25	
Sept 20	17	09	26	





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

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



Month	Male	Female	Total No.	Village Covered
April 20	68	53	121	Balidih, Badahariharpur, Srirampur, Dhatkidih, Padampur ,Pindrabera, Kandra, Gamharia, Virdhwajpur
May 20	80	65	145	
June 20	105	58	163	
July 20	49	81	130	
Aug 20*	359	71	430	
Sept 20*	397	84	471	

*Including Antibody test of villager and emp.

2. 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
- 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 Drinking Water Supply Services Provided through Water Tanker	Purpose
July 20	03	Meeting the need of drinking water for the villagers during family function etc.
Aug 20	02	
Sept 20	02	
July 20	03	
Aug 20	02	
Sept 20	02	



- 3. World Anti-Tobacco Day:** World Anti-Tobacco Day is observed annually on May 31. The theme of World Anti-Tobacco Day 2020 is 'Protecting youth from industry manipulation and preventing them from tobacco and nicotine use'.



According to WHO, tobacco use kills more than 8 million people around the world each year. Smoking any kind of tobacco reduces lung capacity and increases the severity of respiratory diseases. Covid19 is an infectious disease that primarily attacks the lungs. Due to which, research suggests that smokers are at higher risk of developing severe Covid-19 outcomes and death.

In this regard CSR team organized 2-days signature campaign and awareness program in plant premises from 30th May to 31st May 2020 at 8.30 AM to 6.00PM to raise awareness among the workers/employees against bad effect of tobacco in human body. A signature campaign initiated by the Mr. R. K. Singh- MD, APNRL and Mr. Rakesh Gupta –CEO, APNRL with message writing on display board. It revealed that the people are very enthusiastic and coming forward to take part in the signature campaign to reduce the use of the tobacco in our plant as well as in the country. Others senior officers and employees also signed and gave the message for all.

4. Distribution & Spraying Bleaching Powder at village level:



APNRL's corporate social responsibility (CSR) activities reflect its philosophy of helping to build a better, more sustainable society through sound business practices, which earn the trust of stakeholders. APNRL believes that its CSR activities and those of its employees will not only help to contribute to the realization of a sustainable society but also enhance APNRL's corporate value. The Company has always been empowering the village women through various training events to lead their life with sustainable social recognition.



The CSR activities at APNRL have shown its solidarity by initiation of **Health Awareness Drive** in the villages starting from Badahariharpur on 30.7.2020 which will be continued in peripheral village too, with objective of cleanliness and control of the diarrhea, malaria etc. In continuation, we have distributed and sprayed bleaching powder in drainages, wells and water logging area to stop mosquito breeding and to prevent from various diseases caused by dirt & mosquitoes etc. with the support of volunteers from Villages under the **Project of Swachh Gram Swasth Gram**. The persons who actively participated were Kali Charan Sardar, Anil Sardar, Kali pada Sardar etc.

5. **Seminar and Distribution of mosquito net:** The Adhunik Company empowers women through different activities which help them to live an independent life with dignity and social recognition. On the occasion of National Nutritional Week 2020, a program was organized at conference hall, Aganwadi Center Badahariharpur and Srirampur under the social responsibilities, CSR Department, APNRL, Padampur on 3rd & 4th Sept' 2020 respectively. Dr.





G.P.Murmu, OHC-APNRL, Mr. Anil Kumar Soni-DGM-HR , Sanjeet Kumar Sinha-CSR, APNRL, ANM, Anganbadi Sevikas and approximately 50 women participated in the programme.



About 100 mosquito nets distributed among the pregnant and lactating mothers of Badahariharpur , Chotahariharpur, Padampur and Srirampur which has an impact on development, productivity, economic growth and ultimately National development. Women were very happy and thankful to Adhunik CSR team for organising such awareness program

6. Campaign & Distribution of Masks and soaps: Door to door campaign was organized by the CSR



team of the Adhunik Power and Natural Resources Limited (APNRL), Padampur. During the campaign in Badahariharpur, Srirampur, Bikanipur and Padampur, villagers were made aware of Covid- 19 . 1000 no. of face masks and 1000 no. of soaps bar were distributed among Villagers. **Dr. G. P. Murmu suggested villagers to** wash their hands with soap and water after coming from outside and to maintain at least 2 meter (6 feet) social distance so that they can avoid this disease. He also suggested avoiding touching eyes, nose and mouth and making sure that they and the people around them follow hygiene. Further he suggested the villagers to stay home if they feel unwell or having fever, cough and if they feel any difficulty in breathing then immediately consult a physician/ Doctor.



Gobind Majhi, Bangal Tudu and Sonu Hansda were actively involved in distribution of masks and soaps.

7. Covid-19 Pandemic: Massive sanitization drive

Disinfectant spraying activities were organized at Badahariharpur, Padampur, Bikanipur and Srirampur of Dugdha and Rapcha gram Panchayat, Motorized sprayers has been done by tractors and fire bridged vehicle in above mentioned villages. The comprehensive sanitizations drives have been taken on timely manners so that its impact should remain. Apart from that, Adhunik power & Natural Resources Limited, Padampur also distributed masks & hand sanitizer in different govt. department and near villages.



APNRL Preventive measure against COVID-19 impact –

- 1) In house sanitizer consists of Aloe Vera gel/ Fresh Aloe Vera, Alcohol, Essential oil & water has been prepared and placed in every department including canteen, Main Gate, security gate & other conspicuous places etc.
- 2) To avoid social distancing, employees have been requested to come in different shifts and in alternate manner. Also, we are trying for effective manpower engagement during the lock-out period. We are operating with almost half no. of Manpower in regular and Contractual roll.
- 3) Vehicle have been cleaned with sanitizer & minimum No. of employees have been allowed in vehicle & Buses. If required, additional vehicle will also be put to avoid gathering.



Guideline while preventing Covid-19, have been informed to the employees:



- To cover mouth & nose with handkerchief or disposable tissue while coughing, sneezing.
 - To wash hand with alcohol-based sanitizer in every half & hour.
 - To avoid crowded places & maintain at least 2-3 meter distance with every individual.
 - To drink plenty of water and eat nutritional food.
 - To Isolate in case of any COVID-19 symptoms and consult the doctors.
- 4) To maintain cleanliness, housekeeping & Hygiene in the workplace, a special care has been made by spraying the disinfectant periodically to plant premises. Additionally sanitization of entire plant premises on a daily basis has been contracted to an agency.

EDUCATION

Drawing competition: Skill development among the local children is the prime objective of the company under CSR. Drawing competition were organized on the occasion of Environment day 2020 at two age- group, first one was age from 5 yrs to 10 yrs i.e. class I to V and another one was 11 yrs and above i.e. Class VI to Above. The aim for this completion was to develop the creativity in village candidates Drawing competition organized following dates in different Village-

Name of the Village	Date
Padampur -	2.6.2020
Badahariharpur-	2.6.2020
Srirampur -	2.6.2020

After that 3 best village candidates are selected in each group from respective village. Drawing competition started with the sharing of rules and regulation of competition by Mr. Anil Sardar.



At the end they come up with final results and best 3 candidates are selected in each group for prize. Prize distribution function organized on 5.6.2020 at APNRL Campus. During the prize distribution Sri Raghvendra Kumar Singh, Managing Director congratulated each of the participants for their participation as well as their effort. He said that this kind of competition to improve the skill as well as develop their positive thinking regarding our society.

WOMEN EMPOWERMENT & LIVELIHOOD

1. **Self Help Group (SHG) Meeting :** - Monthly meetings of SHG held every month in follows villages -
Srirampur, Padampur, Badahariharpur, Pindrabera, Rapcha, Chotahariharpur. 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 loaning activities.
- ii) To increase social cohesiveness among the members of women Self-Help-Group.

2. **Workshop on Marketing & Networking-11.8.2020:** A self-help group is a homogenous gathering of usually not more than 20 persons who join on a voluntary basis in order to undertake some common activity through mutual trust and mutual help .It is mainly concerned with the poor and it is for the people and of the people. Apart from inculcating socially desirable habits and ethics among members, SHGs serve the purpose of a moneylender, a development bank, a cooperative and a voluntary agency.



We organized a workshop on 11.8.2020 with the members of Vinapani mahila SHG at Chotahariharpur for promotion of Agarbatti production. Mr. Sanjeet Kumar Sinha-CSR motivated the SHG members to engage themselves in Agarbatti making as their livelihood. He said that CSR-Team will facilitate the group in marketing of Agarbatti which will enhance their income. Mr. Vinay Kumar Mahato Gram Pradhan appreciated the members of SHG Group for

their efforts for taking up such project and advised the CSR team of Adhunik Power to provide continue support to the SHG team members to achieve their aim. They include this activity in their livelihood.

3. **Murhi and spice production at Pindrabera:** 15 – members of Jahir Ayo Mahila Samiti Self-help group of Rapcha engaged in Murhi 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.
4. **Agarbatti production:** 14 members of Vina Pani SHG of Chotahariharpur village initiated in Agarbatti making, packaging and selling. This has helped them in increasing corpus fund for their group. They have made this activity as their livelihood. Every month they sold about 300-500 packets of Agarbatti. They earned Rs. 3000.00 to 5000.



Infrastructure

Provide basic infrastructure to the villagers like construction/repairing of road, culverts, development of proper drainage system at village level, development of community centers, renovation of school buildings, electrification, provide safe drinking water facility are the major requirements of village area. We have focused for the development of basic amenities in the periphery villages, as per the need and requirement of the villages.

- 1. 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.

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 Virdhwajpur -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.

CSR team paid a visit to the site along with the villagers and found that the condition of the road is damaged severely. On 23.6.2020 the company provided the 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.

- 2. Repairing of Village Road:** Adhunik Power & Natural Resources Limited, Padampur has been instrumental in improving socio-economic conditions of local communities around which the company operates.

In this background, a meeting was organized with the villagers of Bikanipur- Birdhwajpur and CSR team. During this meeting, the





status of developmental projects being executed under Adhunik's CSR was discussed where the villagers requested for company interventions in repairing of Bikanipur-Mahadeopuram road near pond. The road was damaged due to soil erosion during rainy season for which the villagers have submitted the request letter to CSR dept., APNRL on 24.7.2020 for providing the rejected stone for protection of soil erosion of road.

The villagers told that the condition of village road is so bad there is a high risk of accident. In rainy season accident may occur any time due to the soil erosion. CSR team had visited the site along with the villagers and found that the road was severely damaged and hence arranged the rejected stone (waste material of plant) on 4.8.2020 to fill up the ditches. Villagers were so excited that they manually started leveling up the stone on road without waiting for the company's JCB/labours which showed a good example of community participation for a noble cause. Now, the road is repaired with the help of villagers.

3. **Renovation of Community building, Badahariharpur:** A well-established fact is that infrastructure development accelerates the pace of human development and economic growth. Hence, infrastructure development is identified as a key focus area of Community development in Adhunik



Power & Natural Resources Limited (APNRL), Padampur.

Renovation work completed of Community building, Badahariharpur by local person under the





supervision of the company including doors and windows. **Outside and Inside Painting of Samudayak Bhawan**

4. **Leveling of Football ground, Pindrabera:** Adhunik Power & Natural Resources Limited, Padampur is playing an important role in improving the socio-economic conditions of local communities.

In this background, a meeting was convened by villagers of Pindrabera 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 leveling of football ground.

CSR team paid a visit to the site along with the villagers and found that the condition of the football ground is severely damaged. On 13 Sept.2020 the company provided the JCB for leveling the ground and villagers are very happy with the work.



Other:

World Environment

Day' 2020 "": World Environment Day (WED) has been started celebrating as an annual event on every 5th of June from 1974 in order to raise the 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. The theme for the year 2020 is - 'Converse Biodiversity' (Time for Nature) with a focus on its role in providing the essential infrastructure that supports life on Earth and human development. According to the UN, it is a concern that is both urgent and existential. Biodiversity supports all life on land and below water or



we can say it is the foundation that supports all this. Every aspect of human health is affected by it. It provides clean air, water, food, and is a source of medicines, etc. Human actions like deforestation, encroachment on wildlife habitats, intensified agriculture, and acceleration of global climate change, have disturbed nature and pushed it beyond its limit. According to the UN, it would take 1.6 Earths to meet the demands that humans make of nature every year. If this will continue, it poses a huge biodiversity loss that will have severe implications for humanity as a result of the loss of food and health systems.

APNRL observed the World Environment Day (WED) on 5.6.2020 at plant premises. The World Environment Day celebrated by creating awareness about importance of environment and plantation of Saplings in different area of the plant by company officials. The programme was initiated through the plantation of saplings by MD inside the premises of the company.



Kolhan Nari Shakti also observed World Environment Day. Mrs. Renu Singh - President of Kolhan Nari Shakti initiated plantation work in Chitakoot Apartment, Ramchandrapur. Various competitions were also organized by Kolhan Nari Shakti in Chitrakoot Apartment on the occasion of World Environment Day.

A "Seminar on World Environment Day" jointly facilitated by APNRL and Kolhan Nari Shakti at Sramshakti Hall, APNRL with objective of creating awareness among the Employees & villagers. 150 Approx people participated in this program. Snake Catcher Mr. N. K. Singh was a guest of honor. Workshop began with the welcome note by Mr. Kamlesh Kumar Jha, Manager-Envi., APNRL. It was very informative and motivating to all. CEO Mr. Rakesh Gupta and President, Kolhan Nari Shakti shared their views. At the end of event Mr. R. K. Singh, MD administered oath to participate on environmental conservation. Vote of thanks was given by Dharni Dhar Singh.



International Yoga Day 2020: Adhunik Power & Natural Recourses Limited, Padampur and Kolhan Nari Shakti, Ramchandrapur jointly organized a yoga class on 21.6.2020 on the occasion of International Yoga Day. International Yoga Day is celebrated by world on 21 June every year. About 60 employees





including ward members from the different Department were performed yoga asanas at sramshkti hall APNRL.

The event was inaugurated by the Mr. R. K. Singh MD-APNRL. The sessions which started at 8.00 am



was carried out under the guidance of the yoga instructors Mr. Ashish Ranjan and Akanchha Bharti. All the participants followed the instructions enthusiastically with the objective of incorporating the goodness of Yoga into their own lives. Asanas in standing, sitting as well as laying postures were performed. Pranayam and other breathing exercises were performed followed by the prayer.

Our Honorable MD announced on Yoga Day that Yoga class will be organized in three different places like Chitrakoot Apartment, Shwarrekha Bachelor



hostel, APNRL and Shramshakti Hall, APNRL which helps us to keep physical and mental fitness. It also reduces the mental stress.

In amid corvid-19 period, Yoga class has an important role to play for human being to develop immune system. Every alternate days yoga classes have been organized in plant area which helps us to keep physical and mental fitness. All the participants followed the instructions enthusiastically with the objective of incorporating the goodness of Yoga into their own lives. Asanas in standing, sitting as well as laying postures were performed. Pranayam and other breathing exercises were performed followed by the prayer under the guidance of Instructor Mr. Ashish Ranjan. Every weekend, especial Yoga classes are organized at Chitrakut apartment and Swanrekha Bhawan(bachelor Hostel).



Covid-19 Anti Body Test: An awareness camp regarding testing of covid-19 anti-body was organized in the premises of Occupational Health Center of Adhunik power & Natural Resources Limited, Padampur. In the camp about 1300 people including employees and villagers were examined. The objective of the camp was to make the Company employees & villagers aware of the preventive and curative measures of corona virus and to help them in understanding whether antibody has developed against covid-19 or not (Exposed to covid-19 or not).



News clippings of the various newspapers.

Prepared By - Sanjeet Kumar Sinha

DETAILS OF LOCAL EMPLOYMENT TILL 30.09.2020

S. No.	Emp. Code	E.Name	Department
1	00302223	Mr. Arun Mahato	Electrical
2	00302236	Mr. Rajen Kumar Tudu	WTP, Utilities
3	00302237	Mr. Bangal Majhi	Civil
4	00302384	Mr. Lal Mohan Mahato	Horticulture
5	00302386	Mr. Budhram Baskey	Operation
6	00302387	Mr. Ajit Mahato	Operation
7	00302393	Mr. Bijay Baskey	Civil
8	00302430	Mr. Laxman Baskey	Medical Services
9	00302436	Mr. Raja Ram Baskey	Automobile
10	00302453	Ms. Paneshwari Kumari	Civil
11	00302454	Mr. Sunil Baskey	Coal Logistics
12	00302458	Mr. Nuna Baskey	Automobile
13	00302462	Mr. Rajesh Kumar Mahato	Operation
14	00302463	Mrs. Sonia Baskey	Electrical
15	00302493	Mrs. Surajmani Baskey	EMD
16	00302494	Mrs. Saraswati Devi	Medical Services
17	00302495	Mrs. Anita Mahato	Maintenance
18	00302501	Mrs. Bangi Baskey	AHP
19	00302503	Mr. Raju Tudu	Electrical
20	00302506	Mr. Ruhi Ram Majhi	Maintenance
21	00302507	Mr. Dilip Mahato	DM Plant
22	00302508	Mr. Dulal Mahato	Fire
23	00302509	Mr. Raju Mahato	DM Plant
24	00302510	Mr. Santosh Mardi	Electrical
25	00302516	Mr. Rajesh Mahato	Electrical
26	00302517	Mr. Mohan Lal Mahato	Electrical
27	00302518	Mr. Sumit Kumar Mahato	Electrical
28	00302519	Mr. Tapan Kumar Mahato	Electrical
29	00302520	Mr. Bibhishan Mahato	Automobile
30	00302521	Mr. Suku Murmu	Automobile
31	00302522	Mr. Bimal Kumar Mandal	Operation
32	00302523	Mr. Bablu Besra	Operation
33	00302524	Mr. Vikram Baskey	Maintenance
34	00302525	Mr. Mangal Besra	Operation
35	00302526	Mr. Bir Singh Hembram	Maintenance
36	00302527	Mr. Gopal Hembrom	Operation
37	00302528	Ms. Chhatamuni Baskey	Stores
38	00302529	Mr. Durga Hembrom	Operation
39	00302530	Mr. Suren Baskey	Operation
40	00302531	Mr. Dasmath Hembrom	Operation
41	00302532	Mr. Budheswar Baskey	Operation
42	00302533	Mr. Karan Hembrom	Operation
43	00302534	Mr. Umesh Tudu	Operation
44	00302540	Mr. Birendranath Baskey	Medical Services
45	00302541	Mr. Shailendra Tudu	Medical Services
46	00302550	Mr. Birdhan Baskey	Civil
47	00302574	Mr. Anil Sardar	Civil
48	00302602	Mrs. Sarla Majhi	Administration

49	00302604	Mr. Sohan Kisku	Electrical
50	00302605	Mr. Dilip Kisku	Electrical
51	00302606	Mr. Rabindra Nath Majhi	Operation
52	00302607	Mr. Mokra Murmu	Electrical
53	00302608	Mr. Lakhiram Tudu	Maintenance
54	00302609	Mr. Durga Baskey	Maintenance
55	00302610	Mr. Jiten Hansda	Operation
56	00302611	Mr. Jiten Sardar	Operation
57	00302612	Mr. Ashok Kumar Mahato	Operation
58	00302613	Mr. Mangal Majhi	Electrical
59	00302614	Mr. Sagram Tudu	Electrical
60	00302615	Mr. Sunil Kumar Tudu	Operation
61	00302616	Mr. Ganesh Mahato	Electrical
62	00302617	Mr. Sachin Kumar Tudu	Operation
63	00302618	Mr. Alok Mahato	Electrical
64	00302619	Mr. Rakesh Kumar Mahato	Operation
65	00302620	Mr. Chhotray Majhi	Operation
66	00302621	Mr. Devi Lal Majhi	Ash Loading
67	00302622	Mr. Govind Majhi	Electrical
68	00302628	Mr. Kalipada Singh Sardar	CHP
69	00302644	Mr. Vikram Singh Sardar	Intake Well
70	00302645	Mr. Manik Singh Sardar	Intake Well
71	00302646	Mr. Jagannath Singh Sardar	Intake Well
72	00302647	Mr. Budheshwar Mahato	Intake Well
73	00302659	Mr. Krishna Manjhi	CHP Lab
74	00302660	Mr. Sakla Hembrom	CHP Lab
75	00302661	Mr. Uttam Kumar Mahato	Maintenance
76	00302662	Mr. Shikar Hembrom	C&I
77	00302663	Mr. Ranjit Besra	CHP Lab
78	00302664	Mr. Hopna Baskey	Operation
79	00302665	Mr. Sona Ram Baskey	Operation
80	00302666	Mr. Suku Majhi	AHP
81	00302667	Mr. Gopal Majhi	Operation
82	00302668	Mr. Ramdas Kisku	Operation
83	00302669	Mr. Som Murmu	Operation
84	00302670	Mr. Khirod Chandra Mahato	C&I
85	00302671	Mr. Sona Ram Hembrom	C&I
86	00302672	Mr. Ram Hembrom	CHP Lab
87	00302673	Mr. Rajesh Mahato	C&I
88	00302674	Mr. Nimay Mahato	DM Plant
89	00302676	Mr. Peeton Baskey	CHP Lab
90	00302677	Mr. Raju Baskey	CHP Lab
91	00302678	Mr. Bablu Baskey	CHP Lab
92	00302679	Mr. Bajinath Mardi	Planning & Monitoring
93	00302680	Mr. Nitai Sardar	Planning & Monitoring
94	00302681	Mr. Baliram Murmu	Planning & Monitoring
95	00302682	Mr. Karu Tilka Majhi	C&I
96	00302683	Mr. Rajendra Hembrom	Maintenance
97	00302684	Mr. Jitu Hembrom	CHP Lab
98	00302687	Mr. Soken Tudu	C&I

99	00302688	Mr. Umesh Baskey	AHP
100	00302690	Mr. Anil Tudu	CHP Lab
101	00302694	Mr. Akash Tudu	Stores
102	00302695	Mr. Sushil Kumar Tudu	CHP Lab
103	00302696	Mr. Mahendra Tantubai	Electrical
104	00302697	Mr. Prakash Tudu	Stores
105	00302698	Mr. Karu Besra	C&I
106	00302699	Mr. Bangal Tudu	CHP Lab
107	00302700	Mr. Ravindra Nath Tudu	Electrical
108	00302701	Mr. Som Majhi	CHP Lab
109	00302702	Mr. Salku Tudu	AHP
110	00302707	Mr. Sukram Tudu	CHP Lab
111	00302708	Mr. Jeevan Manjhi	CHP Lab
112	00302709	Mr. Birsa Hansda	Operation
113	00302710	Mr. Surja Hansda	CHP Lab
114	00302711	Mr. Sanjay Mandal	C&I
115	00302712	Mr. Budhadev Mahato	C&I
116	00302713	Mr. Narayan Mahato	Operation
117	00302714	Mr. Jai Chand Mahato	Maintenance
118	00302715	Mr. Mithun Majhi	C&I
119	00302716	Mr. Sumit Kumar Mahato	DM Plant
120	00302717	Mr. Mantu Mahato	CHP Lab
121	00302718	Mr. Santosh Sardar	CHP Lab
122	00302719	Mr. Ranjit Singh Sardar	CHP Lab
123	00302720	Mr. Lal Mohan Mahato	CHP Lab
124	00302721	Mr. Sohan Sardar	CHP Lab
125	00302722	Mr. Paga Sardar	Maintenance
126	00302773	Mr. Shibanath Singh Sardar	Horticulture
127	00302774	Ms. Basanti Singh Sardar	Electrical
128	00302775	Mr. Kali Pado Sardar	Horticulture



YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - National Accreditation Board for Testing Laboratory (NABL) & Jharkhand State Pollution Control Board (JSPCB)

Certified by: - An ISO 9001:2015 & BS OHSAS 18001 : 2007



Certificate No. - TC 7813

ANALYTICAL TEST REPORT

Water Test Report		URL(Unique Lab Report) No.	TC78132030000044P
Date of Issue	30 th September 2020	Report ID	YBAEEL-200304-132814 -WW04
Sample Description	Waste Water	Job code / Ref. no.	YBAEEL/WA/L/C/Sep.-20/14
Type of Industries	Power Generation	Work Order No./ Date	3030004681 - 18/02/2020
Issued to :-	M/s Adhunik Power & Natural Resources Limited (Unit -1) Vill.- Padampur, Behind PGCIL Sub-station, Jamshedpur-832105, Jharkhand.		
Sampling date	26/09/2020	Mode of sample Collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003	Sample Code	200927 - WW - E01
Sampling Location	Outlet of ETP	Sampling Source	Effluent Water
Sample pkg. Condition	Sealed Pack in PP Bottle	Sample Quantity	4000 ml
Meteorological cond.	W.C. - Partly Cloudy	RH - 74 %	Temp. - 26°C
Work allotted date	27/09/2020	Test started on	27/09/2020
		Test completed on	30/09/2020

Test Result

Sl	Parameter	Test Method	Units	Results	Limits
1.	pH value	IS 3025 (P-11):2002	pH	7.84	5.5-9.0
2.	Temperature	IS 3025 (P-09)	°C	29.0	40
3.	Total suspended solids	IS 3025 (P-17):2012	mg/l	74.0	100
4.	Chloride (as Cl ⁻)	IS 3025 (P-32):2003	mg/l	157.1	1000
5.	BOD	IS 3025 (P-44):2009	mg/l	18.8	30
6.	COD	IS 3025 (P-58):2006	mg/l	98.0	250
7.	Oil and grease	IS 3025 (P-39):2003	mg/l	5.2	10
8.	Chromium (as Cr)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.05)	0.05
9.	Copper (as Cu)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.01)	3
10.	Lead (as Pb)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.01)	0.1
11.	Zinc (as Zn)	APHA 3111 B 23 rd edition 2017	mg/l	ND (DL 0.01)	5
12.	Sulphate (as SO ₄ ²⁻)	IS 3025 (P-24):2003	mg/l	19.7	1000

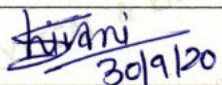
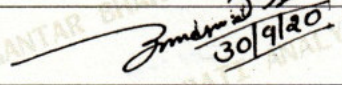
*****End of Test*****

Remarks :-Samples Comply with the prescribed Specification as per IS:2490:1974

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, DL - detectable limit

 Tested by Shivani Kumari Singh Lab Analyst	 Checked by Brij Nandan Kumar In-Charge Pollution & Environment	 Issued by Umesh Das Technical Manager
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Branch Office :- Jamshedpur Dhanbad Hazaribagh Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834001, Jharkhand

Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in

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

Page 1 of 1



Sewage Treatment Plant



HINDUSTAN PETROLEUM CORPORATION LIMITED

(A Government of India Enterprise)

QUALITY CONTROL LABORATORY

Visakha New Terminal

CONVENT JN.-SHEELANAGAR ROAD, BEHIND AIRPORT,

VISAKHAPATNAM- 530014

TEST REPORT

Product : HP INDUSTRIAL DIESEL OIL

Customer / Supplier / : NBOT-BONDED TANKS-PSD
Branch Plant
Source of Sample : TK105
Tank No : TK105
Qty of Sample/ : 1ltr uml / tk70/868.3 b.no.36/2019

Density/Type of Sample
Catg / Evnt / Actvty : Aft Receipt thru Dedicated P/L
Receipt/Despatch Mode :
Sample Drawn by : RAMAKRISHNA

Test Report No. : BFT/10835
Date of Sample Drawn : 20/07/19
Date of Sample Receipt : 21/07/19
Date of Sample Testing : 22/07/19
Date of Report : 22/07/19
Date of Printing : 22/07/19
JDE Sample Number : 865213
Batch No :

Test Line Number	Characteristics	Units	Test Method	Specifications		Result Value
				Min	Max	
5	DENSITY@ 15°C	Kg/m3	IS 1448 [P:16]	-	-	867.8
6	KINEMATIC VISCOSITY @ 40° C	cSt	IS 1448 P:25	2.500	15.000	4.860
7	FLASH POINT - PMCC	°C	IS 1448 P:21	66	-	79
8	WATER CONTENT	% Vol	IS 1448 P:40	-	.250	.100
9	TOTAL SULPHUR	% Mass	ASTM D 4294	-	1.50	.47
10	POUR POINT SUMMER	°C	IS 1448 P:10	-	21	3

Remarks:

Sample S.No.BFT/271 meets specification as per IS-15770:2008(Reaffirmed2014) in the above parameters

Appearance : Light Brown

- Notes :
- 1) The sample is drawn by client and results relate to sample tested
 - 2) The test report shall not be reproduced except in full without prior written approval of the Lab Incharge
 - 3) This test report shall not be used in any advertising media or as evidence in the Court of Law without prior written consent of Laboratory
 - 4) Test results reported are valid at the time of testing
 - 5) This is a system generated test report and hence does not require signature

Tested By : 35323320
VELAMURI DATTATREYA

Reviewed and Approved By : 35323320
VELAMURI DATTATREYA

*** END OF TEST REPORT ***

Page No. : 1 of 1

प्ररूप XV
(प्रथम अनुसूची का अनुच्छेद 6 देखिए)
FORM XV
(see Article 6 of the First Schedule)

अधिष्ठापनों में पेट्रोलियम के आयात और भंडारण के लिए अनुज्ञप्ति
LICENCE TO IMPORT AND STORE PETROLEUM IN AN INSTALLATION

अनुज्ञप्ति सं. (Licence No.) : P/HQ/JH/15/1065(P257355)

फीस रूप (Fee Rs.) 50000/- per year

M/s. Adhunik Power & Natural Resources Ltd., Village-Padampur, Behind PGCIL Substation,, Adityapur-Kandra Road,, Taluka: Adityapur(Gamharia), District: SARAIKELLA KHARSWAN, State: Jharkhand, PIN: 832105 को केवल इसमें यथा विनिर्दिष्ट वर्ग और मात्राओं में पेट्रोलियम 5000.00 KL आयात करने के लिए और उसका, नीचे वर्णित और अनुमोदित नक्शा संख्या P/HQ/JH/15/1065(P257355) तारीख 23/12/2011 जो कि इससे उपाबद्ध हैं, में दिखाए गए स्थान पर भण्डारण के लिए पेट्रोलियम अधिनियम, 1934 के उपबंधों या उसके अधीन बनाए गए नियमों तथा इस अनुज्ञप्ति की अतिरिक्त शर्तों के अधीन रहते हुए, यह अनुज्ञप्ति अनुदत्त की जाती है।

Licence is hereby granted to M/s. Adhunik Power & Natural Resources Ltd., Village-Padampur, Behind PGCIL Substation,, Adityapur-Kandra Road,, Taluka: Adityapur(Gamharia), District: SARAIKELLA KHARSWAN, State: Jharkhand, PIN: 832105 valid only for the importation and storage of 5000.00 KL Petroleum of the class and quantities as herein specified and storage thereof in the place described below and shown on the approved plan No P/HQ/JH/15/1065 (P257355) dated 23/12/2011 attached hereto subject to the provisions of the Petroleum Act, 1934 and the rule made thereunder and to the further conditions of this Licence.

यह अनुज्ञप्ति 31st day of December 2022 तक प्रवृत्त रहेगी।
The Licence shall remain in force till the 31st day of December 2022

पेट्रोलियम का विवरण /Description of Petroleum	अनुज्ञप्त मात्रा (किलोलीटरों में) /Quantity licenced in KL
वर्ग क प्रपुंज पेट्रोलियम /Petroleum Class A in bulk	NIL
वर्ग क प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class A, otherwise than in bulk	NIL
वर्ग ख प्रपुंज पेट्रोलियम /Petroleum Class B in bulk	NIL
वर्ग ख प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class B, otherwise than in bulk	NIL
वर्ग ग प्रपुंज पेट्रोलियम /Petroleum Class C in bulk	5000.00 KL
वर्ग ग प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class C, otherwise than in bulk	NIL
कुल क्षमता /Total Capacity	5000.00 KL

December 15, 2011

Chief Controller of Explosives

1). Amendment dated - 23/12/2011

अनुज्ञप्त परिसरों का विवरण और अवस्थान
DESCRIPTION AND LOCATION OF THE LICENSED PREMISES

अनुज्ञप्त परिसर जिसकी विन्यास सीमाएं अन्य विशिष्टताएं संलग्न अनुमोदित नक्शों में दिखाई गई हैं Plot No: Plot No. 161,, Behind PGCIL.Substation adityapur, Kandra Road, Village- Padampur, District: SARAIKELLA KHARSWAN, State: Jharkhand, PIN: 999999 स्थान पर अवस्थित है तथा उसमें निम्नलिखित Two Petroleum ClassCAboveground storage tanks,togetherwith other connected facilities. सम्मिलित हैं।

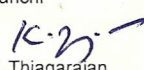
The licensed premises, the layout, boundaries and other particulars of which are shown in the attached approved plan are situated at Plot No: Plot No. 161,, Behind PGCIL.Substation adityapur, Kandra Road, Village- Padampur, District: SARAIKELLA KHARSWAN, State: Jharkhand, PIN: 999999 and consists of Two Petroleum ClassCAboveground storage tanks,togetherwith other connected facilities. together with connected facilities.

पेज सं. 2

अनुज्ञप्ति संख्या-(Licence No.) P/HQ/JH/15/1065 (P257355)

नवीनीकरण के पृष्ठांकन के लिए स्थान
SPACE FOR ENDORSEMENT OF RENEWALS

पेट्रोलियम अधिनियम, १९३४ के उपबन्धों या उनके अधीन बनाए गए नियमों या इस अनुज्ञप्ति की शर्तों का उल्लंघन न होने की दशा में यह अनुज्ञप्ति फ़िस में बिना किसी छूट के दस वर्ष तक नवीकृत की जा सकेगी।
This licence shall be renewable without any concession in fee for ten years in the absence of contravention of any provisions of the Petroleum Act, 1934 or of the rules framed thereunder or of any of the conditions of this licence.

1).		31/12/2013	Sd/- PESO ADMIN
2).	23/09/2013	31/12/2018	Sd/- R.P.Singh Jt. Chief Controller of Explosives For Dy. Chief Controller of Explosives Ranchi
3).	18/02/2019	31/12/2022	 K. Thiagarajan Dy. Chief Controller of Explosives Ranchi

उप मुख्य विस्फोटक नियंत्रक, राँची
Dy. Chief Controller of Explosives, Ranchi

यदि अनुज्ञप्ति परिसर इसमें उपाबद्ध विवरण और शर्तों के अनुरूप नहीं पाए जाते हैं और जिन नियमों और शर्तों के अधीन यह अनुज्ञप्ति मंजूर की गई है उनमें से किसी का उल्लंघन होने की दशा में यह अनुज्ञप्ति रद्द की जा सकती है और अनुज्ञप्तिधारी प्रथम अपराध के लिए साधारण कारावास से, जो एक मास तक हो सकता है, या जुर्माने से, जो एक हजार रुपये तक हो सकता है, या दोनों से, और प्रत्येक पश्चातवर्ती अपराध के लिए साधारण कारावास से जो तीन मास तक हो सकता है, या जुर्माने से, जो पांच हजार रुपये तक हो सकता है, या दोनों से, दण्डनीय होगा।

This licence is liable to be cancelled if the licensed premises are not found conforming to the description given on the approved plan attached hereto and contravention of any of the rules and conditions under which this licence is granted and the holder of this licence is also punishable for the first offence with simple imprisonment which may be extend to one month, or with fine which may extend to one thousand rupees, or with both and for every subsequent offence with simple imprisonment which may extend to three months, or with fine which may extend to five thousand rupees or with both.



YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - National Accreditation Board for Testing Laboratory (NABL) & Jharkhand State Pollution Control Board (JSPCB)
 Certified by: - An ISO 9001:2015 & BS OHSAS 18001 : 2007



Certificate No. - TC 7813

ANALYTICAL TEST REPORT

Atmospheric Pollution Test Report			URL(Unique Lab Report) No.		TC78132020000302F		
Report Release Date		30 th September 2020		Report ID		YBAEEL-200304-132814 -N04	
Sample Description		Work Zone Noise		Job code/ Ref. no.		YBAEEL/WA/L/A/Sep. -20/15	
Type of Industry		Power Generation		Work Order No./ Date		3030004681 - 18/02/2020	
Issue to		M/s Adhunik Power & Natural Resources Limited (Unit -1) Vill.- Padampur, Behind PGCIL Sub-station, Jamshedpur-832105, Jharkhand.					
Sampling Period		24/09/2020 – 25/09/2020		Mode of sample collection		By YBAEEL Team	
Sampling Protocol		IS 9876:1981 (RA 2007) & CPCB Method S.O.50 (E) dated 11/01/2010					
Meteorological Cond.		Temp.– 26°C		RH % - 74%		W.C.– Cloudy	
Sample receipt Date		27/09/2020		Analysis Started on		27/09/2020	
		Analysis completed on				30/09/2020	

Test Results

Sl.NO.	Locations	Parameters	Units	Day Time	Night Time	Limit
1.	Turbine Floor	Leq	dB (A)	83.4	82.9	85 dB
2.	Coal Crusher	Leq	dB (A)	79.0	71.0	
3.	Cooling Tower	Leq	dB (A)	83.8	83.6	
4.	Compressor House	Leq	dB (A)	83.8	83.1	
5.	Boiler Feed Pump Area	Leq	dB (A)	82.7	81.8	

End of Report

- Day time shall mean from 6.00 a.m. to 10.00 p.m.
- Night time shall mean from 10.00 p.m. to 6.00 a.m.
- Silence zone is an area comprising not less than 100 meters around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority.
- Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
- dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale(A) which is relatable to human hearing.

Remarks	Sample Complies with the prescribed specification as per Indian Factories Act - 1948.	
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit,	
Note	The parameters marked with * are not accredited by NABL.	
Specific contractual notes	All values are expressed in as unit.	
	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 15 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 Ranchi Jurisdiction	
	Tested by Amit Kumar Sinha Lab Analyst	Verified by Brij Nandan Kumar Section In-Charge
		Issued by Umesh Das Technical Manager



Branch Office : - Jamshedpur Dhanbad Hazaribag Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand
 Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in





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Certificate No. - TC 7813

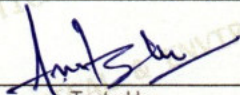
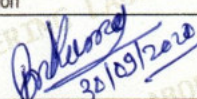
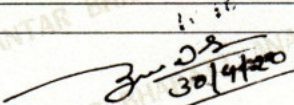
ANALYTICAL TEST REPORT

Atmospheric Pollution Test Report		URL (Unique Lab Report) No.	TC78132020000300P
Report Release Date	30 th September 2020	Report ID	YBAEEL-200304-132814 -A03
Sample Description	Ambient Air Quality (Core Zone)	Job code/ Ref. no.	YBAEEL/WA/L/A/Sep. -20/15
Type of Industry	Power Generation	Work Order No./ Date	3030004681 - 18/02/2020
Issue to	M/s Adhunik Power & Natural Resources Limited (Unit -1) Vill.- Padampur, Behind PGCIL Sub-station, Jamshedpur-832105, Jharkhand.		
Sampling Period	25/09/2020 – 26/09/2020	Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS:5182 and CPCB Air Manual Volume-1(NAAQM/36/2012-13)		
Sampling Locations	A. Sati Steel	B. Hostel	C. Switch Yard
Meteorological Cond.	W.C.- Cloudy	RH % - 69%	Temp. - 32°C
Sample receipt Date	27/09/2020	Analysis Started on	27/09/2020
		Analysis completed on	30/09/2020

Test Results

Parameters	Test Method	Units	Sampling Location			NAAQS (2009)
			Site A	Site B	Site C	
Particulate matter (PM ₁₀)	IS:5182 (P-23) 2006	µg/m ³	90.9	88.0	76.0	100
Particulate matter (PM _{2.5})	USEPA -40 CFR (PART 50) (50.7)	µg/m ³	54.1	39.3	42.3	60
Sulphure Dioxide (SO ₂)	IS:5182 (P-2) 2001 RA 2012	µg/m ³	8.3	10.4	12.5	80
Nitrogen Dioxide (NO ₂)	IS:5182 (P-6) 2006 RA 2012	µg/m ³	49.2	30.0	31.2	80
Ammonia (NH ₃)	SOP No. YBAEEL/SOP/AIR/01	µg/m ³	20.1	25.0	36.5	400
Ozone (O ₃)*	IS:5182 (P-09) 1974	µg/m ³	26.0	2.4	2.5	180
Carbon Monoxide (CO)*	IS:5182 (P-10) 1999 RA 2003	mg/m ³	1.98	1.8	ND(DL 1.8)	04
Lead (Pb)	IS:5182 (P-22) 2004	µg/m ³	0.05	0.02	0.05	01
Nickel (Ni)*	SOP No. YBAEEL/SOP/AIR/01	ng/m ³	ND(DL 8.8)	ND(DL 8.8)	ND(DL 8.8)	20
Arsenic (As)*	SOP No. YBAEEL/SOP/AIR/01	ng/m ³	ND(DL 1.0)	ND(DL 1.0)	ND(DL 1.0)	06
Benzene (C ₆ H ₆)*	IS:5182 (P-11) 2006	µg/m ³	ND (DL 0.06)	ND (DL 0.06)	ND (DL 0.06)	05
Benzo (a) pyrene (BaP)* Particulate Phase Only	IS:5182 (P-12) 2004 RA 2017	ng/m ³	ND (DL 0.2)	ND (DL 0.2)	ND (DL 0.2)	01

End of Report

Remarks	Samples Comply with the prescribed specification as per NAAQS 2009.		
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit,		
Note	The parameters marked with * are not accredited by NABL.		
Specific contractual notes	All values are expressed in as unit.		
	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 15 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 Ranchi Jurisdiction			
		 30/09/2020	
Tested by		Verified by	
Amit Kumar Sinha		Brij Nandan Kumar	
Lab Analyst		Section In-Charge	
		 30/09/2020	
		Issued by	
		Umesh Das	
		Authorized Signatory Technical Manager	



Branch Office : - Jamshedpur Dhanbad Hazaribagh Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834001, Jharkhand
Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in





ADHUNIK POWER & NATURAL RESOURCES LIMITED

WORKS : Village - Padampur, Behind P.G.C.I.L. Substation,
Adityapur - Kandra Road, Saraikela - Kharsawan, PIN - 832402 Jharkhand
Phone : +91 - 657 - 6628400, Fax : +91 - 657 - 6628440
CIN - U40101WB2005PLC102935

APNRL/HR/Office Order/10
5th August'2016

Office Order

As per the directions of the Ministry of Environment & Forest, Government of India while granting the Environment Clearances vide letter no J-13011/8/2009-IA.II(T), dated 29th Aug 2009 (Unit I) & Letter No :J13012/8/2009-IA .II (T) 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 In charge who is directly reporting the Managing Director of Organization. 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, Modeling, Monitoring etc & other complex studies to the appropriate agency and also sometimes In-house work of Monitoring,
- Dealing with JSPCB/CPCB/MoEF & CC for various aspects including obtaining clearances for Plant and Plant led development and policy makings 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 MOEF& 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 dialogs, 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 at 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, Sarat Bose Road, Kolkata - 700 020
Ph : +91 - 33 - 30517100 / 7200 / 7300 • Fax : +91 - 33 - 22890285

REGD. OFFICE : 14, N. S. Road, 2nd Floor, Kolkata - 700 001, Phone No. +91 - 33 - 22428551, 22428553
Website : www.adhunikgroup.com



ADHUNIK POWER & NATURAL RESOURCES LIMITED

WORKS : Village - Padampur, Behind P.G.C.I.L. Substation,
Adityapur - Kandra Road, Saraikela - Kharsawan, PIN - 832402 Jharkhand
Phone : +91 - 657 - 6628400, Fax : +91 - 657 - 6628440
CIN - U40101WB2005PLC102935

05.08.2016

Annexure I

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 & training Ensure safety and health hazards are corrected, eliminated or guarded.	Plant Incharge
06	Medical Officer	Attend all types of OPD 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 Scape on vacant land of Plant premises.	Environment Manager

Sr. Manager (HR)

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

Ph : +91 - 33 - 30517100 / 7200 / 7300 • Fax : +91 - 33 - 22890285

REGD. OFFICE : 14, N. S. Road, 2nd Floor, Kolkata - 700 001, Phone No. +91 - 33 - 22428551, 22428553

Website : www.adhunikgroup.com

Kamlesh Kr Jha

From: Kamlesh Kr Jha
Sent: 25 September 2020 15:39
To: 'ranchijspcb@gmail.com'; 'ro.ranchi-mef@gov.in'; 'JSPCB, Jamshedpur'
Subject: Submission of Environmental Statement (Form V) for Unit II (2019-2020) of M/s Adhunik Power & Natural Resources Limited, Village-Padampur, Dist-Saraikela-Kharswan, Jharkhand.
Attachments: APNRL-Environment Statement (2019-2020)-Unit II.pdf

Ref No : Environment Clearance file No: J-13012/8/2009-IA.II(T), Dated 09th May 2011.

Dear Sir,

In compliance with the above general condition no XIII of environmental clearance, please find the attached environmental statement (Form V) for the financial year 2019-2020.
This is for your kind information & record please.

Thanking You

Your's faithfully

Kamlesh Kumar
Manager-Environment
Adhunik power & natural resources Ltd
Vill-Padampur, District-Saraikela, Jharkhand
Mobile no-7763818994



ADHUNIK POWER & NATURAL RESOURCES LTD.

(Formerly Adhunik Thermal Energy Limited)

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

Ref: MOE&F, RNC/HYC/RA/24620/02

Dated: 24.06.2020

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 - October 2019 to March 2020-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 October 2019 to March 2020.

This is for your reference and record, please.

Thanking you,

For Adhunik Power & Natural resources Limited

(Authorized Signatory)

Encl: As Above

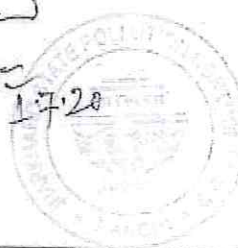
Copy to:

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



Received

17.7.20



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

Works: Padampur, Saraikela, Kharsawan, Jharkhand

CIN U40101WB2005PLC102935