



Power

Ref: APL/MEL/EMD/EC/MoEFCC/207/05/23
Date- 23.05.2023

To,

**Additional Principal Chief Conservator of Forest (APCCF)
Ministry of Environment, Forest and Climate Change**

Integrated Regional Office, Bhopal
Kendriya Paryavaran Bhavan,
Link Road No- 3, E-5, Ravi Shankar Nagar
Bhopal - 462 016 (M.P)

Sub: Six Monthly Compliance Status of Environment Clearances for Mahan Thermal Power Plant at Village Bandhaura, District Singrauli, Madhya Pradesh.

Ref: Environmental clearance letter no. **J-13011/56/2006-IA.II (T)** Dated- 20.04.2007 & Its subsequent amendment vide letter dated 10.02.2009, 23.08.2013 and 08.04.2016.

Dear Sir,

With reference to above subject, please find enclosed herewith Six-Monthly Environment Clearances (EC) compliance status report along with Environmental monitoring reports as Ambient Air Quality, Water Quality, Noise level & Soil quality, CAAQM data, Met. data, Greenbelt development, Fly ash & CSR Report etc. for the period of **October'2022 to March'2023** in soft (e-mail).

This is for your kind information & record please.

Thanking You,

Yours faithfully,

for **Mahan Energen Ltd.**

**(Santosh Kumar Singh)
Head AESG**

Encl: as above

CC:

Member Secretary
Central Pollution Control Board
Parivesh Bhavan, East Arjun Nagar
Kendriya Paryavaran Bhawan
New Delhi- 110 032.

Member Secretary,
Madhya Pradesh Pollution Control Board
Paryavaran Parisar, E-5, Arera Colony,
Bhopal, MP

The Regional Officer
Madhya Pradesh Pollution Control Board
Bhakuar, Navgarh, Singrauli, MP-486887

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**SIX MONTHLY COMPLIANCE REPORT
OF
ENVIRONMENTAL CLEARANCE (EC)**

For

1200 (2x600) MW Thermal Power Plant

At

**Village Bandhaura, Tehsil Mada,
District Singrauli, Madhya Pradesh**

Submitted to:

**Integrated Regional Office, Bhopal
Ministry of Environment & Forest & Climate Change
Central Pollution Control Board, New Delhi &
Madhya Pradesh Pollution Control Board, Bhopal**



Submitted By:

**Environment Management Department
Mahan Energen Limited**

**Bandhaura Village, Mada Tehsil, Singrauli
District, Madhya Pradesh-486 886**

Period: October'2022 to March'2023

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Mahan Energen Limited

Introduction:

Mahan Energen Limited is operating 2 x 600 MW Coal based Thermal Power Plant situated at Villages Bandhaura, Khairahi, Karsualal and Nagwa in Singrauli District of Madhya Pradesh.

The Environmental Clearance for the project with capacity 4x500 MW was accorded on 20.04.2007 and the same was amended for change in capacity & unit size (3x600 MW) on 10.02.2009. Further, an amendment to the EC for change in source of Coal from domestic to import and road transportation of coal for period of exceeding three years was accorded on 23.08.2013. An amendment in EC on 08.04.2016.

Adani Power Limited, has implemented the Approved Resolution Plan and acquired 100% of paid-up share capital and management control of EPMPPL on **16.03.2022**. "**Mahan Energen Limited**" is wholly owned subsidiary of Adani Power Limited and incorporated under Companies (Incorporation) Rules, 2014 date 25.03.2022.

Environment Clearance is transferred from Essar Power (MP) Limited to **Mahan Energen Limited vide F. No. J-13011/56/2006-IA-II(T) dated; 15th September' 2022**

Further, a proposal for amendment in CONDITION NO. (xxxi) of granted Environment Clearance (EC) was considered in 40th EAC (Thermal Power Plant) Meeting held on 25th April'2023. The Hon'ble Committee has considered the proposal for Amendment in CONDITION NO. (xxxi) of Environment Clearance.

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**COMPLIANCE STATUS ON ENVIRONMENTAL CLEARANCE
1200 (2×600) MW Coal Based Thermal Power Plant**

Vide letter No. J-13011/56/2006-IA.II (T) dated 20.04.2007 and
its subsequent amendment dated 10.02.2009; 23.08.2013, 08.04.2016
and EC transferred from Essar Power to Mahan Energen Ltd. on 15.09.2022

A	Specific Condition	Status
(i)	The total land requirement shall not exceed 700 ha for all activities/ facilities of the power project put together.	Complied. All project activities/Facilities of the Power Project have been developed within 700 ha only.
(ii)	Forestry clearance for diversion of 70 ha forest land involved in the project shall be obtained before starting construction on the forest land.	Compiled The forest area is optimised to 34.98 ha now. Stage-1 FC has been obtained from MoEFCC vide letter no.6-MPC 043/2008-BHO/822 dated. 02.04.2009 and final diversion of land does not proceed. No construction activities have been taken place in the forest land.
(iii)	R&R in sufficient detail shall be finalized before award of the project and a copy of the detailed R&R shall be submitted to MoEF within three months of the issue of this letter or before the award of the project whichever is earlier.	Complied As previous, R&R Benefits are being provided as per Madhya Pradesh R&R policy 2002 and in line with agreement executed on 18.10.2008 between Collector, Singrauli and EPMPL. Copy of the agreement with MP Govt. has been forwarded to MoEFCC vide our letter no. EPMPL/ MoEF/ 07.07.2010. Adani Power Limited has implemented the Approved Resolution Plan and acquired 100% of paid-up share capital and management control of EPMPL on 16.03.2022. "Mahan Energen Limited" is wholly owned subsidiary of Adani Power Limited
(iv)	The PAFs/ PAPs losing their homesteads, or a major portion of the land shall not be ousted from the land till they are settled at the alternate sites.	Complied R&R implementation as per the agreement dated; 05.09.2007 has been done. All payments as per the demand received from the state government & local administration have been made, plots allotted to all the homesteads. Supporting documents already submitted with EC compliance report.
(v)	Ash and sulphur content in the coal to be used in the project shall not exceed 35% and 0.5% respectively.	Complied. Ash and Sulphur content in the coal is being maintained below 35% & 0.5% respectively.

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		MEL Power Plant is based on Pit head TPP and all parameters are being achieved as per notification.
(vi)	Two bi-flue stacks of 275m height each shall be provided with continuous online monitoring equipment. Exit velocity of at least 25m/sec shall be maintained	Complied One bi-flue stack of 275 M height has been installed. Also, CEMS (Continuous emission monitoring system) has been provided for both units. Exit velocity is maintained > 25m/s. Stack emission monitoring Report is enclosed as Annexure-I .
(vii)	High efficiency electrostatic precipitators (ESPs) with efficiency not less than 99.9% shall be installed to ensure that particulate emission does not exceed 100 mg/Nm ³ .	Complied ESP (9 Fields) with efficiency of 99.9% installed in both the units to meet permissible norm for particulate emissions less than 50 mg/Nm ³ . Stack Emission Monitoring Report has been provided as Annexure – I .
(viii)	Space provision shall be made for Flue Gas De-sulphurisation (FGD) unit, if required at a later stage.	Complied Space for FGD has been provided in the adjacent to chimney. As per MoEFCC Notification dated 5 th Sep 2022, Mahan TPP is falling under Category "C" Non- retiring TPPs and the timelines for compliance of SO ₂ emission is up to December'2026.
(ix)	Low NOx burners shall be provided.	Complied Low NOx burners have already been provided in each boiler.
(x)	Adequate dust extraction system such as bag filters and water spray system in dusty areas such as coal and ash handling areas, transfer areas and other vulnerable areas shall be provided.	Complied Dust extraction systems over fly ash silo, coal bunkers and conveyor junction points have been installed. Dry fog diffusion systems have already been provided in coal crusher house and conveyor transfer points. Water sprinkling system & Mobile Fog Cannon has been provided in coal yard area.
(xi)	Fly ash shall be collected in dry form and ash generated shall be used in a phased manner as per provisions of the notification on Fly Ash Utilization issued by the Ministry in September, 1999 and its amendments. By the end of 9th year full fly ash utilization should be ensured. Unutilized ash shall be disposed of in the ash pond in the form of High Concentration Slurry.	Complied. MoUs / Agreements have been signed with Cement Industries as M/s Prism Johnson Limited Cement and M/s Birla Corporation India Limited (BCIL) to lift the fly ash generated from the power plant. We have also signed a MOU with "Ashtech (India) Private Ltd." for lifting the Ash being generated from the Power Plant.

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		<p>Only unutilized Ash is being sent to Ash dyke / pond.</p> <p>Ash generation and utilization report is enclosed as Annexure- IV.</p>
(xii)	<p>Ash pond shall be lined with HDPE geo-synthetic membrane to avoid leaching. Adequate safety measures shall be implanted to protect the ash pond bund from getting breached.</p>	<p>Complied</p> <p>HDPE lining has been provided in the ash pond. The ash pond operates with HCSO system. Adequate safety measures such as proper bund slope, toe drain around the dyke, etc., have been taken to protect the bund.</p>
(xiii)	<p>A conservation plan for Schedule-1 animals reported in the study area of the project shall be prepared in consultation with an expert organization like Wildlife Institute of India at Dehradun and duly approved by State Wildlife Department of Madhya Pradesh. A copy of the same shall be submitted to the ministry and Regional Office at Bhopal within six months of the date of issue of this letter. The plan so prepared shall be implemented effectively. Necessary allocation of funds for the same shall be made and will be included as project cost.</p>	<p>Complied</p> <p>Ecological Assessment and Flora & Fauna Wildlife Conservation & Management Plan has been prepared by M/s. Good Earth Enviro Care in Association with Department of Environment Management, Indian Institute of Social Welfare & Business Management, Kolkata and report is submitted to PCCF – WL, Bhopal vide letter no APL/MEL/Env/PCCF/407/23 dated; 03.04.2023.</p> <p>The plan will be implemented with due approval of CWLW. Acknowledged copy is enclosed as Annexure VI.</p>
(xiv)	<p>Rain water harvesting shall be practiced. A detailed scheme for rain water harvesting to recharge the ground water aquifer shall be prepared in consultation with Central Ground Water Authority/ State Ground Water Board and a copy of the same shall be submitted within 3 months to the Ministry.</p>	<p>Complied</p> <p>Rainwater Harvesting study carried out & report is submitted to Regional Director, Central Ground Water Board, Bhopal & Member Secretary, Central Ground Water Authority, New Delhi. vide letter no. APL/MEL/ENV/CGWA/404/23 dated; 03.04.2023. Rainwater harvesting within the plant premises has been constructed/ implemented to harvest the rainwater.</p> <p>Acknowledged copy is enclosed as Annexure VII.</p> <p>Pond deepening work are being carried out in Five-Six ponds in villages falling under the area. More than 400 farmers availed benefits from pond deepening for irrigation in their agricultural land.</p>
(xv)	<p>The treated effluents conforming to the prescribed standards only shall be discharged in the Bhalea nallah.</p>	<p>Complied.</p> <p>Effluent is being treated suitably and analysis results are well within the stipulated MPPCB/CPCB standard by the process of neutralizing and treated water being used for gardening. We are maintaining zero</p>

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		discharge of treated effluent. Effluent analysis results are provided as Annexure-I.
(xvi)	Regular monitoring of ground water in and around the ash pond area shall be carried out, records maintained and periodic reports shall be furnished to the Regional Office of the Ministry.	Complied Regular monitoring of ground water is being carried out in and around the ash pond area. Record is maintained and enclosed as Annexure - I.
(xvii)	A 100 m wide green belt shall be developed all around the plant area and 20 m wide green belt shall be developed all around the ash pond and township covering a total area of 100 ha.	Complied Greenbelt is already developed over an area of 109 ha. However, some casualties were noted by the IRO. All casualty replacement will be done during Monsoon 2023. Greenbelt report is enclosed as Annexure- II.
(xviii)	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Complied
(xix)	Leq of Noise Level should be limited to 75 dBA and regular maintenance of equipment to be undertaken. For people working in high noise areas, personal protection devices should be provided.	Complied Leq of noise level at project boundary is being monitored and observed less than 75 dB(A). People working in high noise area are provided with PPEs like ear- muff and ear plug. Monitoring report is enclosed as Annexure-I.
(xx)	Regular monitoring of the ambient air quality shall be carried out in and around the power plant and records maintained. 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.	Complied. Online CAAQ monitoring system for Ambient air quality is already established. Ambient Air Quality Monitoring is also being carried out by third party consultant. Monitoring reports is enclosed as Annexure-I. Records of the same are being maintained and report is being sent to the Regional Office of the MoEFCC, CPCB & MPPCB. Online ambient air quality system also connected with MPPCB & CPCB portal.
(xxi)	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, informing that the project has been accorded environmental clearance and copies of clearance letters 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://www.envfor.nic.in .	Complied

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(xxii)	A separate environment monitoring cell (EMC) with suitable qualified staff should be set up for implementation of the stipulated environmental safeguards.	Complied We have established separate environmental monitoring cell with well qualified staff to carry out regular surveillance for implementation of stipulated environmental safeguards
(xxiii)	A half yearly report on the status of implantation of the stipulated conditions and environmental safeguards should be submitted to this Ministry, its Regional Office at Bhopal, CPCB and SPCB	Complied Six monthly compliance reports is being submitted regularly. Last compliance report for the period of April'2022- September'22 submitted vide letter no. APL/EPMPL/EMD/EC/ MoEFCC/235/11/22 dated 29.11.2022.
(xxiv)	Regional Office of the Ministry of Environment & Forests located at Bhopal will monitor the implementation of the stipulated conditions. A complete set of documents including 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.	Complied. All necessary information forwarded to the MoEFCC Regional Office, Bhopal on regular basis.
(xxv)	Separate funds should be allocated for implementation of environmental protection measures along with item-wise break-up. This cost should be included as part of the project cost. The funds earmarked for the environment protection measures should not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	Complied Separate Budget has been allocated for the Environmental Protection Measures by Mahan Energen Limited.
(xxvi)	Full cooperation should be extended to the scientists/ officers from the Ministry/ Regional Office of the Ministry at Bhopal/ the CPCB/ the SPCB who would be monitoring the compliance of environmental status.	Full co-operation & support is being extended to all the Govt visiting officials always.
EC Amendment vide letter no. J-13011/56/2006 -IA. II (T) dated: 23.08.2013		
(xxvii)	The project proponent shall upload the status of compliance of the conditions stipulated in the environmental clearance issued vide this Ministry's letter of even no. dated 20.04.2007. in its website and updated periodically and also simultaneously send the same by e-mail to the Regional Office of the Ministry of Environment and Forests.	Complied. EC compliance report of Mahan Energen Limited is being uploaded on Adani Power website and soft copy is being sent to Regional Office of MoEFCC, CPCB and MPPCB.

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(xxviii)	Criteria pollutants levels including NOx, RSPM (PM-10 & PM-2.5) SO2, NOx (from stack & ambient air) shall be regularly monitored and results displayed in your website and also at the main gate of the power plant	Complied. Criteria pollutants levels including NOx, RSPM (PM-10 & PM-2.5) SO2, NOx (from stack & ambient air) being regularly monitored, and results are displayed at the main gate of the Power Plant & same being submitted to concern authorities. Monthly Env. Monitoring are being done by third party also and report is being sent to pollution control board on monthly basis. Environmental monitoring report is enclosed as Annexure-I.
(xxix)	Avenue plantation along the route (both sides of the road) of imported coal transportation from railway siding at Mahadiya /Singrauli Railway Siding to Rajmilan-Bandhoura- Power Plant site, over a distance of 63 kms shall be raised by the project proponent at its own cost. The status of implementation shall be submitted to the Regional Office of the Ministry.	Complied Domestic Coal is being used for the operation of Power Plant and Coal is procured through Forward e-auction from the nearby Coal mines of SECL/NCL. Currently transportation of the coal is not being done through Mahadiya Coal siding.
(xxx)	It shall be ensured that only mechanized covered trucks are used for imported coal transportation.	Complied The transportation by road is done through mechanically covered trucks to the extent possible, else through tarpaulin covered trucks so as to prevent coal dust dispersion in the atmosphere.
(xxxii)	A long term study of radioactivity and heavy metals contents on coal to be used shall be carried out through a reputed institute once the power plant becomes operational. Thereafter mechanism for all in-built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.	Complied Domestic Coal are being used for power generation for Mahan TPP. Periodical coal and ash analysis are being carried out through a reputed institute. M/s Bhabha Atomic Research Centre (BARC), Department of Atomic Energy, Govt. of India for Radioactivity and heavy metal contents and reports is being submitted periodically with Six monthly EC compliance report to Ministry, CPCB and MPPCB. For provision of In-built mechanism continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash), the technology and monitoring instrument is not available with the suppliers in the country and is not feasible to monitor in this mechanism.

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		<p>To amend the said condition in granted EC has been applied at MoEFCC portal on dated: 04.04.2023.</p> <p>The amendment proposal was considered in 40th EAC (Thermal Power Plant) Meeting held on 25th April'2023 for Amendment in CONDITION NO. (xxxii) of Environment Clearance (EC) The Hon'ble Committee has recommended the proposal for Amendment in CONDITION NO. (xxxii) of EC.</p>
(xxxii)	<p>The recommendation of the Central Electricity Authority issued vide it's letter no. 159/100ITP&I/CEA/2011, dated 01.02.2013, on the feasibility of transportation of coal from Mahadiya Railway Siding to Mahan TPP site shall be implemented.</p>	<p>Currently transportation of the coal is not being done through Mahadiya Railway siding.</p> <p>Coal is procured through e-auction from the nearby Coal mines of Northern coal Field and APMDCL-Suliyari Coal mine.</p>
(xxxiii)	<p>The project proponent shall maintain a log book of imported coal and Bill of Imports for coal to establish that the coal used for the power project are additional coal coming to the country. These documents shall be submitted to the Regional Office of the Ministry from time to time.</p>	<p>MEL are not using imported Coal for Power plant. We are mostly procuring the Coal through Forward e-auction from the nearby coal mines as NCL & SECL.</p>
EC Amendment vide letter no. J-13011/56/2006 -IA.II (T) dated 08.04.2016		
(xxxiv)	<p>The Sulphur and ash contents of domestic coal shall not exceed 0.5% and 35 % respectively. The coal shall be sourced through e-auction only in case of emergency and non-viability of imported coal. In case of variation of quality at any point of time, fresh reference shall be made to the Ministry for suitable amendments to the environmental clearance. However, for the imported coal, the ash and sulphur contents will be as specified in the earlier order.</p>	<p>Complied</p> <p>Mahan Energen Limited currently procuring coal through domestic sources only. Ash and Sulphur and ash content in the coal is being maintained below 35% & 0.5% respectively and also being complied as per notification of Pit head based TPP.</p>
(xxxv)	<p>The road transportation shall be restricted to the route as approved earlier vide amendment dated 23.08.2013.</p>	<p>Complied</p> <p>Road transportation is being done as per the local administration instruction/approved route only and with mechanically covered truck and with instruction of Local Administration.</p> <p>Feasibility study and survey has been completed from Gajara Bahara Railway Siding to Mahan TPP.</p>

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		Schedule/timeline for installation of coal Pipe Conveyor belt from Gajara Bahara Railway Siding to TPP is already submitted.
(xxxvi)	The transportation by road shall be through mechanically covered trucks to the extent feasible, else through tarpaulin covered trucks so as to prevent coal dust dispersion in the atmosphere.	Compiled & followed. Transporting of the coal is being done through trucks covered with tarpaulin with proper sealing arrangement as per the MoEFCC and local authority direction.
(xxxvii)	Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring report.	Being Complied Solar Power streetlights is under installation within the plant premises, and it will be completed by 30th September'2023. we have already installed Solar power panels in Township.
(xxxviii)	Monitoring of surface water quantity and quality 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 also be undertaken and results/findings submitted along with half yearly monitoring report.	Complied Regular monitoring of surface water quality is being carried out on regular basis. Record are maintained & also report are sent to the Regional Office of the Ministry, CPCB & MPPCB on regular basis. Analysis Report of Surface Water Quality is enclosed as Annexure-I.
(xxxix)	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	Complied There is no disturbance caused to any water body including natural drainage system in the area due to operation of the plant
(xl)	CSR schemes identified based on need-based assessment shall be implemented in consultation with the village Panchayat and the District Administration starting from the development of project itself. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for community development activities and income generating programs.	Compiled & followed CSR activities / programs are totally based on the need of the community having special focus on livelihood generation, health and education. Separate budget is allocated for CSR programs. For livelihood restoration of displaced people monthly sustenance allowance (Bhatta) is being given to PAPs. Local youths are also engaged under different contractors working inside the plant to provide them relevant training, exposure & livelihood. CSR progress report is enclosed as Annexure-V.
(xli)	For proper and periodic monitoring of CSR activities, a CSR committee or a Social Audit committee or a suitable credible external	Being Complied & compliance assured on regular basis.

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	agency shall be appointed. CSR activities shall also be evaluated by an independent external agency. This evaluation shall be both concurrent and final.	CSR activities are implemented in consultation and collaboration with nearby community & Panchayats leader as well as District Administration. Regular community meetings are organised in all the villages to understand the issues of community. Social development activities have been carried out for Need Based under the CSR activities by Adani Foundation .
(xliii)	An Environmental Cell comprising of at least one expert in environmental science/ engineering, ecology, occupational health and social science, shall be created preferably 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 Plant who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures.	Complied We have established separate environmental monitoring cell with well qualified staff to carry out regular surveillance for implementation of stipulated environmental safeguards.
EC Transferred from Essar to Mahan Energen Limited on dated 15th September 2022		
1.	2X600 MW Mahan Super Thermal Power Project at Tehsil Mada, District- Singrauli (Madhya Pradesh)- Transfer of environmental clearance from M/s Essar Power (M.P.) Ltd. to M/s Mahan Energen Limited-reg This has reference to your online proposal no. IA/MP/THE/269676/2022 dated 26 th April 2022 regarding transfer of the Environmental clearance (EC) for the above said project from M/s Essar Power (M.P.) Ltd to M/s Mahan Energen Limited .	Noted
2.	The ministry had earlier issued EC for 4x200 MW Mahan super thermal power project at tehsil Mada, District- Singrauli (Madhya Pradesh) in favour of M/s Essar Power (M.P.) Limited vide letter dated 20 th April 2007, the said EC was further amended vide letter 10 th Feb 2009, 23 rd August'2013 and 18 th April'2016 for reducing the power generation capacity to 3 x 600 MW, changing the fuel source and extending the validity of EC.	Noted.
3.	As per details submitted by the PP the M/s Essar Power (M.P.) Limited (earlier owner) could achieve the capacity of 2 x 600 = 1200 MW only within the validity period of EC i.e.,19.04.2017	Noted

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	against the EC generated (reduced the capacity 3x 600 MW) by the Ministry to the aforesaid plant. Accordingly, CTO was obtained from SPCB vide letter dated 30.08.2016 from commissioned capacity i.e. 2 x 600 MW.	
4.	M/s Mahan Energen Limited has informed that the unit of M/s Essar power M P Limited was admitted into the corporate Insolvency Resolution process (CIRP) vide order dated 29.09.2020 passed by National Company Law Tribunal New Delhi and M/s Adani Power Ltd has acquired 100% paid share capital and Management control of M/s Essar power (M.P.) Ltd, and thus necessitating transfer of all requisite approvals in the name of M/s Mahan Energen Limited.	Noted & agreed.
5.	M/s Mahan Energen Limited has submitted and affidavit to abide by the terms and conditions stipulated in the environmental clearance 20 th April 2007 and its subsequent amendments dated 10 th February 2009, 23 rd August 2013 and 08 th April, 2016 issued in the name of M/s Mahan Energen Limited.	Noted and being complied Environment clearance 20 th April 2007 and its subsequent amendments dated 10 th February 2009, 23 rd August 2013 and 08 th April 2016.
6.	As per the relevant provision of the EIA Notification 2006, the environmental clearance granted by the ministry vide letter No. J-13011/56/2006-IA-II(T) dated 20 th April 2007 and its subsequent amendments dated 10 th February, 2009, 23 rd August, 2013 and 8 th April, 2016 to the project 4 x200 MW (3X600 MW reduced capacity) MW Mahan Super Thermal Power Project at Tehsil- Mada, Village- Bandhaura, Nagwa, Karsualal and Khairahi, District- Singrauli, Madhya Pradesh is hereby transferred from M/s Essar power (M.P) Limited to M/s Mahan Energen Limited, with the condition that the aforesaid power plant will be operated on the power generation capacity 2 x600 MW Further expansion shall be taken up only after prior Environmental Clearance under the vision of the EIA Notification, 2006, as amended. The other terms and condition as mentioned in the initial Environmental Clearance and its further amendments shall remaining unchanged.	Noted & agreed
7.	This issued with approval of the competent authority.	Noted.

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**Summary of Environmental Monitoring Report
Period from October'2022 to March'2023**

Ambient Air Quality Monitoring Results

Location		Near Admin Building				Near Gate No. 2				Near Gate No. 3			
Month & Year	Date	PM-10	PM-2.5	SO2	NO2	PM-10	PM-2.5	SO2	NO2	PM-10	PM-2.5	SO2	NO2
		Unit-µg/Nm ³				Unit-µg/Nm ³				Unit-µg/Nm ³			
	Permissible Limit	100	60	80	80	100	60	80	80	100	60	80	80
Oct-22	01.10.2022	66.7	34.0	17.8	22.5	60.1	30.9	14.8	21.6	57.7	27.5	14.6	19.9
	06.10.2022	68.9	32.2	14.3	25.6	62.3	31.2	15.2	20.6	56.4	28.1	13.5	19.1
	10.10.2022	65.8	33.6	16.8	23.8	58.5	30.5	13.8	21.3	55.5	25.2	15.3	17.7
	13.10.2022	69.8	35.9	14.5	24.3	63.2	32.1	14.2	19.3	59.1	24.8	16.3	19.8
	17.10.2022	67.8	34.6	15.2	27.0	61.2	31.3	14.2	22.0	57.1	27.4	13.2	20.7
	20.10.2022	71.2	33.6	14.7	28.3	64.6	30.5	16.9	23.3	55.0	28.1	14.0	19.9
	24.10.2022	65.8	34.5	19.6	28.8	62.6	30.5	15.2	23.8	57.1	25.9	16.8	21.3
	27.10.2022	68.5	35.2	16.5	25.4	61.9	32.1	16.3	24.6	55.1	25.2	13.6	22.7
	Avg. Value	68.1	34.2	16.2	25.7	61.8	31.1	15.1	22.1	56.6	26.5	14.7	20.1
Nov-22	01.11.2022	64.2	33.3	15.0	23.3	71.2	36.2	17.9	25.5	52.6	23.7	14.3	20.5
	04.11.2022	67.5	30.0	16.4	22.4	69.8	34.6	18.5	24.7	54.2	24.6	16.3	23.4
	07.11.2022	64.3	29.6	17.2	23.8	72.8	36.2	16.5	24.2	51.3	26.7	15.5	21.7
	10.11.2022	69.1	27.5	15.6	23.9	74.2	37.1	17.2	23.1	57.0	30.0	14.5	22.4
	14.11.2022	66.3	30.8	16.7	21.8	76.1	32.9	19.2	23.9	55.8	27.1	13.4	19.5
	17.11.2022	64.5	27.9	14.7	22.1	74.3	35.8	16.9	25.6	54.3	28.7	17.4	22.4
	21.11.2022	62.8	32.9	14.7	20.7	68.7	33.3	16.9	24.4	50.6	24.6	16.5	26.6
	24.11.2022	61.5	33.0	17.2	24.3	72.5	37.1	16.8	28.8	54.9	28.3	14.3	23.2
	27.11.2022	63.1	32.9	16.8	23.0	70.6	31.2	17.4	23.3	51.7	29.6	15.8	21.7
Avg. Value	64.8	30.9	16.0	22.8	72.2	34.9	17.5	24.8	53.6	27.0	15.3	22.4	
Dec-22	01.12.2022	61.3	29.8	13.5	24.6	73.6	33.6	18.4	24.1	49.5	21.6	10.2	19.6
	05.12.2022	69.9	31.4	14.9	23.3	74.9	34.8	17.8	20.6	48.2	24.8	13.6	21.8
	08.12.2022	65.8	34.1	18.7	25.7	68.2	32.9	20.7	23.8	52.6	26.4	14.8	23.6
	12.12.2022	68.1	32.6	12.8	26.9	64.9	31.8	17.6	26.9	57.9	27.6	10.9	24.7
	15.12.2022	70.6	36.7	15.9	24.6	70.4	32.9	21.5	28.1	46.9	25.8	15.8	20.5
	19.12.2022	66.9	34.6	16.9	21.3	64.3	36.7	15.9	25.4	46.7	22.5	13.2	17.6
	22.12.2022	62.8	28.2	14.6	26.8	72.1	34.2	17.4	23.4	43.6	26.9	12.4	19.7
	26.12.2022	63.4	30.7	15.6	22.4	73.9	30.7	18.7	25.9	52.6	28.4	11.5	16.8
	29.12.2022	67.3	33.4	16.5	20.7	66.4	36.8	15.3	27.7	55.6	23.4	15.8	19.5
Avg. Value	66.2	32.4	15.5	24.0	69.9	33.8	18.1	25.1	50.4	25.3	13.1	20.4	
Jan-23	02.01.2023	65.6	35.8	16.3	25.2	74.7	39.6	20.3	26.6	55.6	30.8	13.9	22.4
	05.01.2023	74.0	38.7	14.9	23.9	77.6	41.7	19.8	23.9	53.3	27.1	15.6	24.1
	09.01.2023	68.2	36.7	15.9	23.2	66.9	35.4	17.3	24.9	56.3	32.1	16.2	24.4
	12.01.2023	63.6	33.7	14.5	24.3	72.9	33.3	15.5	23.2	50.1	28.7	12.7	22.6
	16.01.2023	73.5	37.5	13.0	24.6	66.1	36.7	16.5	25.7	53.8	31.7	17.5	24.6

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	19.01.2023	70.8	37.1	14.7	25.6	71.3	32.5	13.7	23.6	50.8	28.3	16.1	22.9
	23.01.2023	66.4	33.7	16.5	24.9	68.7	37.9	15.3	24.6	47.8	24.6	14.7	22.1
	26.01.2023	67.9	36.2	13.6	20.0	76.2	39.6	16.8	23.9	48.2	25.8	13.2	19.4
	30.01.2023	65.2	34.2	14.2	20.6	63.5	34.6	17.8	25.5	57.9	31.2	15.6	23.1
	Avg. Value	68.4	36.0	14.8	23.6	70.9	36.8	17.0	24.7	52.6	28.9	15.1	22.8
Feb-23	02.02.2023	60.2	33.7	14.4	22.7	69.8	38.3	17.8	24.1	58.9	33.3	15.1	24.7
	06.02.2023	67.3	36.2	17.3	26.6	74.6	41.7	16.7	26.0	56.4	30.8	13.5	21.3
	09.02.2023	68.5	36.2	15.6	20.7	64.9	36.9	15.5	25.0	57.0	31.8	14.5	19.4
	13.02.2023	70.5	39.6	13.9	21.0	67.2	37.1	14.1	21.9	59.5	32.1	18.0	26.0
	16.02.2023	71.9	40.0	15.0	25.5	71.0	39.2	13.7	22.7	51.4	29.2	14.1	21.7
	20.02.2023	73.1	40.5	14.3	22.4	69.9	38.3	11.8	21.7	52.7	32.2	15.3	23.3
	23.02.2023	69.5	38.7	13.3	23.0	70.2	40.8	16.1	27.2	49.7	28.7	16.0	24.7
	27.02.2023	64.6	37.9	12.4	23.1	73.3	42.1	15.1	25.5	52.5	29.6	15.5	22.7
	Avg. Value	68.2	37.9	14.5	23.1	70.1	39.3	15.1	24.3	54.8	31.0	15.3	23.0
Mar-23	02.03.2023	63.9	36.7	12.6	19.6	65.7	36.6	15.1	20.9	54.7	31.7	13.7	26.1
	06.03.2023	73.7	41.7	14.5	25.6	70.1	39.2	17.1	28.1	61.4	33.3	15.2	18.7
	09.03.2023	66.7	35.4	13.9	18.1	64.9	34.6	13.1	21.0	62.9	35.0	16.2	22.7
	13.03.2023	69.1	39.6	15.9	19.1	69.5	38.7	11.9	20.4	57.1	37.4	16.7	23.8
	16.03.2023	65.8	40.8	14.1	27.6	75.5	40.4	15.4	25.9	56.6	32.1	13.1	21.6
	20.03.2023	74.4	44.8	16.7	22.7	70.6	43.7	14.3	22.4	54.1	29.6	17.1	25.6
	23.03.2023	70.2	38.7	13.8	22.7	74.3	40.1	15.2	25.9	49.4	26.7	15.9	28.2
	27.03.2023	69.7	37.9	13.5	21.5	71.2	39.2	15.3	23.6	55.4	30.8	16.9	25.0
	30.03.2023	68.7	38.3	11.3	22.5	67.5	37.9	13.4	27.3	57.7	31.7	14.7	23.0
		Avg. Value	69.1	39.3	14.0	22.2	69.9	38.9	14.5	23.9	56.6	32.0	15.5

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Stack Emission Monitoring Results (October'2022 to March'2023)									
Location		Unit-1				Unit-2			
Month	Date	PM	SO ₂	NO _x	Mercury (Hg)	PM	SO ₂	NO _x	Mercury (Hg)
		Unit-mg/Nm ³				Unit-mg/Nm ³			
	Permissible Limit	50**	200**	450**	0.03**	50	200**	450**	0.03**
Oct-22	20.10.2022	Unit-Shutdown				28.56	734.0	288.00	BQL (0.01)
Nov-22	26.11.2022	35.23	746.78	356.94	BQL (0.01)	38.24	782.18	318.49	BQL (0.01)
Dec-22	17.12.2022	36.84	769.75	397.41	BQL (0.01)	Unit -Shutdown			
Jan-23	31.01.2023	31.94	748.00	326.00	BQL (0.01)	35.50	762.0	368.0	BQL (0.01)
Feb-22	21.02.2023	34.04	726.44	293.15	BQL (0.01)	38.33	743.60	311.60	BQL (0.01)
Mar-23	21.03.2023	39.64	817.00	375.15	BQL (0.01)	42.56	780.78	346.45	BQL (0.01)

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Surface Water Quality Monitoring Results (October-2022 to March-2023)

Month			October-2022		January-2023	
Date			15.10.2022		16.01.2023	
Sr. NO.	Parameters	Unit	Nr. Gate No. 1	Nr. Gate No. 3	Nr. Gate No. 1	Nr. Gate No. 3
1	pH @ 25 oC	-	7.11	7.19	7.34	7.23
2	Turbidity	NTU	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)
3	Total Dissolved Solids @ 180 °C	mg/L	364	279	401.0	325.0
4	Total Hardness as CaCO3	mg/L	180	127	196.0	140.0
5	Alkalinity as CaCO3	mg/L	240	212.00	192.0	156.0
6	Calcium as Ca	mg/L	53.71	37.27	59.32	38.5
7	Magnesium (Mg)	mg/L	11.18	8.26	11.66	1069.0
8	Sulphate	mg/L	12.54	21.02	18.12	23.52
9	Nitrate	mg/L	0.31	0.29	0.52	0.26
10	Iron	mg/L	0.12	0.31	0.103	0.492
11	Fluoride	mg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)
12	Sulphide	mg/L	BQL(QL=0.2)	BQL(QL=0.2)	BQL(QL=0.2)	BQL(QL=0.2)
13	Zinc (Zn)	mg/L	0.071	BQL(QL=0.02)	0.071	BQL(QL=0.02)
14	Chloride	mg/L	71.98	49.98	82.97	54.98
15	Residual Chlorine	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)
16	Colour	Hazen	BQL(QL=1)	BQL(QL=1)	BQL(QL=1)	BQL(QL=1)
17	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable
18	Mineral Oil	mg/L	BQL(QL=1)	BQL(QL=1)	BQL(QL=1)	BQL(QL=1)
19	Ammonia	mg/L	280	1.40	1.96	0.56
20	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable
21	Chloramines as Cl2	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)
22	Cyanide	mg/L	BQL(QL=0.025)	BQL(QL=0.025)	BQL(QL=0.025)	BQL(QL=0.025)
23	Aluminum (Al)	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)
24	Arsenic (As)	mg/L	BQL(QL=0.005)	BQL(QL=0.005)	BQL(QL=0.005)	BQL(QL=0.005)
25	Barium as Ba	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)
26	Boron (B)	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)
27	Cadmium (Cd)	mg/L	BQL(QL=0.002)	BQL(QL=0.002)	BQL(QL=0.002)	BQL(QL=0.002)
28	Copper (Cu)	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)
29	Lead (Pb)	mg/L	BQL(QL=0.005)	BQL(QL=0.005)	BQL(QL=0.005)	BQL(QL=0.005)
30	Manganese (Mn)	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)
31	Mercury (Hg)	mg/L	BQL(QL=0.0005)	BQL(QL=0.0005)	BQL(QL=0.0005)	BQL(QL=0.0005)
32	Selenium (Se)	mg/L	BQL(QL=0.005)	BQL(QL=0.005)	BQL(QL=0.005)	BQL(QL=0.005)
33	Molybdenum as Mo	mg/L	BQL(QL=0.01)	BQL(QL=0.01)	BQL(QL=0.01)	BQL(QL=0.01)
34	Total Chromium Cr	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)

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35	Nickel as (Ni)	mg/L	BQL(QL=0.01)	BQL(QL=0.01)	BQL(QL=0.01)	BQL(QL=0.01)
36	Silver (Ag)	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)
37	Anionic Detergent	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)
38	Naphthalene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)
39	1-Methylnapthalene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)
40	2-Methylnapthalene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)
41	Acenaphthylene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)
42	Acenaphthene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)
43	Fluorene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)
44	Phenanthrene	µg/L	BQL(QL=5)	BQL(QL=5)	BQL(QL=5)	BQL(QL=5)
45	Anthracene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)
46	Fluoranthene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)
47	Pyrene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)
48	Benzo(a) anthracene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)
49	Chrysene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)
50	Benzo (b) fluoranthene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)
51	Benzo(K) fluoranthene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)
52	Benzo(a)pyrene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)
53	Dibenzo(a,h)anthracene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)
54	Benzo (g,h,i)perylene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)
55	Indenol(1,2,3-cd)pyrene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)
56	PCB 1016	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)
57	PCB 1221	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)
58	PCB 1232	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)
59	PCB 1242	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)
60	PCB 1248	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)
61	PCB 1254	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)
62	PCB 1260	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)
63	Bromoform	mg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)
64	Dibromochloromethne	mg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)
65	Bromodichloromethane	mg/L	BQL(QL=0.06)	BQL(QL=0.06)	BQL(QL=0.06)	BQL(QL=0.06)
66	Chloroform	mg/L	BQL(QL=0.2)	BQL(QL=0.2)	BQL(QL=0.2)	BQL(QL=0.2)
67	o,p-DDT	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)
68	p,p-DDT	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)
69	o,p-DDE	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)
70	p,p-DDE	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)
71	o,p-DDD	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)
72	p,p-DDD	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)
73	Isoproturon	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)
74	Alachlor	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)
75	Atrazine	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)
76	Aldrin/Dieldrin	µg/L	BQL(QL=0.01)	BQL(QL=0.01)	BQL(QL=0.01)	BQL(QL=0.01)
77	Gamma-HCH(Lindane)	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)
78	Alpha HCH	µg/L	BQL(QL=0.005)	BQL(QL=0.005)	BQL(QL=0.005)	BQL(QL=0.005)
79	Beta HCH	µg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)
80	Delta HCH	µg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)

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81	Endosulfan (alpha)	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)
82	Endosulfan (Beta)	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)
83	Endosulfan (Sulphate)	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)
84	Monocrotophos	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)
85	Ethoin	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)
86	Chlorpyrifos	µg/L	BQL(QL=0.25)	BQL(QL=0.25)	BQL(QL=0.25)	BQL(QL=0.25)
87	Phorate	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)
88	Butachlor	µg/L	BQL(QL=20)	BQL(QL=20)	BQL(QL=20)	BQL(QL=20)
89	Methyl Parathion	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)
90	Malathion	µg/L	BQL(QL=0.25)	BQL(QL=0.25)	BQL(QL=0.25)	BQL(QL=0.25)
91	E.Coli (MPN/100 ml)	MPN/100ml	Absent	Absent	Absent	Absent
92	Total Coliform	MPN/100ml	Absent	Absent	Absent	Absent

STP Treated Water Test Results (October'2022 to March'2023)

Location of Sewage Treatment Plant: Near Admin Building						
Month	Date	Parameters				
		pH	TSS (mg/L)	BOD (mg/L)	COD (mg/L)	Oil & Grease (mg/L)
October-2022	15.10.2022	8.61	16	14.2	60	(QL=2)
November-2022	10.11.2022	8.46	14	13.7	50	(QL=2)
December-2022	15.12.2022	7.90	17	11.2	45	(QL=2)
January-2023	16.01.2023	8.06	23	13.6	50	(QL=2)
February-2023	08.02.2023	7.66	19	11.2	40	(QL=2)
March-2023	13.03.2023	7.83	23	12.0	55	(QL=2)

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ETP Treated Water Test Results
(October-2022 to March-2023)

Location of Effluent Treatment Plant: DM plant						
Month	Date	Parameters				
		pH	TSS (mg/L)	BOD (mg/L)	COD (mg/L)	Oil & Grease (mg/L)
October-2022	15.10.2022	8.10	20	9.6	40	(QL=2)
November-2022	10.11.2022	8.34	24	10.43	40	(QL=2)
December-2022	15.12.2022	8.12	27	9.78	35	(QL=2)
January-2023	16.01.2023	7.86	33	12.8	40	(QL=2)
February-2023	08.02.2023	7.59	28	16.8	60	(QL=2)
March-2023	13.03.2023	7.76	35	14.0	70	(QL=2)

Ambient Noise Monitoring Results														
October'2022 to March'2023														
Location			Admin			Gate No.1			Gate No. 2			Gate No. 3		
Month	Date	Duration	Leq	Max	Min	Leq	Max	Min	Leq	Max	Min	Leq	Max	Min
October-2022	15.10.2022	Day	63.2	69.7	49.2	71.4	73.4	65.8	67.8	71.2	55.1	65.3	70.1	51.3
		Night	52.3	61.2	46.5	65.0	66.0	52.3	58.9	64.3	51.2	56.4	56.2	44.7
November-2022	15.11.2022	Day	58.4	62.5	44.1	65.8	70.3	53.4	63.1	68.4	49.9	53.3	57.8	44.1

Mahan Energen Limited

		Night	26.2	52.1	39.7	52.8	56.1	49.7	49.1	53.1	45.8	42.8	45.6	35.7
December-2022	05.12.2022	Day	51.5	59.5	44.9	60.4	68.4	53.9	62.0	67.3	51.8	45.2	58.5	41.5
		Night	48.4	53.7	39.8	58.0	61.5	45.1	59.4	62.8	45.2	40.8	51.2	37.4
January-2023	09.01.2023	Day	54.0	59.6	48.6	62.4	68.0	57.5	60.2	65.2	54.3	47.2	56.2	40.3
		Night	50.4	54.6	49.7	54.8	58.6	49.1	56.5	60.1	47.4	42.1	46.2	36.1
February-2023	23.02.2023	Day	54.9	58.9	47.3	61.1	71.2	54.6	59.0	62.0	53.1	47.6	52.4	46.2
		Night	48.7	50.9	46.5	52.8	53.8	51.7	55.3	59.2	49.2	42.2	43.9	39.6
March-2023	06.03.2023	Day	67.3	69.5	63.9	61.9	70.2	58.2	69.2	71.6	65.6	56.2	58.4	53.1
		Night	54.4	57.6	48.2	54.1	62.8	50.7	65.4	67.3	63.7	48.8	52.1	44.6

GO Green Mechanisms Pvt Ltd
Analysis Results For The Month of October 2022
On Site 24 Hourly Monitoring Results

Company Name Mahan Energen Limited
Sample Type AMBIENT AIR QUALITY MONITORING
Sample Description Near Admin Building

Sr. No	Parameters	RPM (<10)	RPM (<2.5)	SO ₂	NO ₂	Mercury(Hg)
	Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	ng/m ³
	Reference Method	IS 5182 part-23	GGMPL/SOP/A/60	IS 5182 Part-2	IS 5182 Part-6	Method IO-3.4
	Norms	100	60	80	80	NS
	Date of Monitoring					
1	03.10.2022	66.7	34.0	17.8	22.5	BQL (QL=1)
2	06.10.2022	68.9	32.2	14.3	25.6	BQL (QL=1)
3	10.10.2022	65.8	33.6	16.8	23.8	BQL (QL=1)
4	13.10.2022	69.8	35.9	14.5	24.3	BQL (QL=1)
5	17.10.2022	67.8	34.6	15.2	27.0	BQL (QL=1)
6	20.10.2022	71.2	33.6	14.7	28.3	BQL (QL=1)
7	24.10.2022	65.8	34.5	19.6	28.8	BQL (QL=1)
8	27.10.2022	68.5	35.2	16.5	25.4	BQL (QL=1)
AVERAGE		68.1	34.2	16.2	25.7	BQL (QL=1)

BQL - Below Quantification Limit; Avg. - Average; NS- Not Specified

Norms- As per national Ambient Air Quality Standards

Analyses By

Shiyal Kishor
 Shiyal Kishor



Approved By

Pankil Patel
 Pankil Patel

.....END.....

GO Green Mechanisms Pvt Ltd
Analysis Results For The Month of October 2022
On Site 24 Hourly Monitoring Results

Company Name Mahan Energen Limited
Sample Type AMBIENT AIR QUALITY MONITORING
Sample Description Near Gate No - 02

Sr. No	Parameters	RPM (<10)	RPM (<2.5)	SO ₂	NO ₂	Mercury(Hg)
	Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	ng/m ³
	Reference Method	IS 5182 part-23	GGMPL/SOP/A A/60	IS 5182 Part-2	IS 5182 Part-6	Method IO-3.4
	Norms	100	60	80	80	NS
	Date of Monitoring					
1	03.10.2022	60.1	30.9	14.8	21.6	BQL (QL=1)
2	06.10.2022	62.3	31.2	15.2	20.6	BQL (QL=1)
3	10.10.2022	58.5	30.5	13.8	21.3	BQL (QL=1)
4	13.10.2022	63.2	32.1	14.2	19.3	BQL (QL=1)
5	17.10.2022	61.2	31.3	14.2	22.0	BQL (QL=1)
6	20.10.2022	64.6	30.5	16.9	23.3	BQL (QL=1)
7	24.10.2022	62.6	30.5	15.2	23.8	BQL (QL=1)
8	27.10.2022	61.9	32.1	16.3	24.6	BQL (QL=1)
AVERAGE		61.8	31.1	15.1	22.1	BQL (QL=1)

BQL - Below Quantification Limit; Avg. - Average; NS- Not Specified

Norms- As per national Ambient Air Quality Standards

Analyses By

Shiyal Kishor
 Shiyal Kishor



Approved By

Pankil Patel
 Pankil Patel

.....END.....

GO Green Mechanisms Pvt Ltd
Analysis Results For The Month of October 2022
On Site 24 Hourly Monitoring Results

Company Name Mahan Energen Limited
Sample Type AMBIENT AIR QUALITY MONITORING
Sample Description Near Gate No - 03

Sr. No	Parameters	RPM (<10)	RPM (<2.5)	SO ₂	NO ₂	Mercury(Hg)
	Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	ng/m3
	Reference Method	IS 5182 part 23	GGMPL/SOP/A A/60	IS 5182 Part-2	IS 5182 Part-6	Method IO-3.4
	Norms	100	60	80	80	NS
	Date of Monitoring					
1	03.10.2022	57.7	27.5	14.6	19.9	BQL (QL=1)
2	06.10.2022	56.4	28.1	13.5	19.1	BQL (QL=1)
3	10.10.2022	55.5	25.2	15.3	17.7	BQL (QL=1)
4	13.10.2022	59.1	24.8	16.3	19.8	BQL (QL=1)
5	17.10.2022	57.1	27.4	13.2	20.7	BQL (QL=1)
6	20.10.2022	55.0	28.1	14.0	19.9	BQL (QL=1)
7	24.10.2022	57.1	25.9	16.8	21.3	BQL (QL=1)
8	27.10.2022	55.1	25.2	13.6	22.7	BQL (QL=1)
AVERAGE		56.6	26.5	14.7	20.1	BQL (QL=1)

BQL - Below Quantification Limit; Avg. - Average; NS- Not Specified

Norms- As per national Ambient Air Quality Standards

Analyses By

Shiyal K.B.
 Shiyal Kishor



Approved By

Pankil Patel

Pankil Patel

.....END.....

GO Green Mechanisms Pvt Ltd
Analysis Results For The Month of November-2022
On Site 24 Hourly Monitoring Results

Company Name		Mahan Energen Limited												
Sample Type		AMBIENT AIR QUALITY MONITORING												
Sample Description		Near Admin Building												
Sr. No	Parameters	PM (<10)	PM (<2.5)	SO ₂	NO ₂	Mercury(Hg)	O ₃	NH ₃	CO	Benzene	Benzo (a) Pyrene	Pb	Ni	As
	Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	ng/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ⁴	ng/m ⁵	µg/m ⁴	ng/m ⁵	ng/m ⁵
	Reference Method	IS 5182 part-23	GGMPL/SOP/AA/60	IS 5182 Part-2	IS 5182 Part-6	Method IO-3.4	IS 5182 Part-9	GGMPL/SOP/A A/62	IS 5182 Part-10	IS 5182 Part-11	IS 5182 Part-12	Method IO 3.4	Method IO 3.4	Method IO 3.4
	Norms	100	60	80	80	NS	100	400	4	5	1	1	20	6
	Date of Monitoring													
1	01.11.2022	64.2	33.3	15.0	23.3	BQL(QL=1)	14.6	12.2	0.38	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
2	04.11.2022	67.5	30.0	16.4	22.4	BQL(QL=1)	13.9	11.8	0.34	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
3	07.11.2022	64.3	29.6	17.2	23.8	BQL(QL=1)	15.1	12.6	0.30	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
4	10.11.2022	69.1	27.5	15.6	23.9	BQL(QL=1)	16.1	13.4	0.35	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
5	14.11.2022	66.3	30.8	16.7	21.8	BQL(QL=1)	14.2	11.2	0.34	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
6	17.11.2022	64.5	27.9	14.7	22.1	BQL(QL=1)	15.6	11.4	0.35	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
7	21.11.2022	62.8	32.9	14.7	20.7	BQL(QL=1)	14.8	13.6	0.33	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
8	24.11.2022	61.5	33.0	17.2	24.3	BQL(QL=1)	15.9	13.1	0.33	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
9	27.11.2022	63.1	32.9	16.8	23.0	BQL(QL=1)	16.4	12.8	0.37	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
AVERAGE		64.8	30.9	16.0	22.8	BQL(QL=1)	15.2	12.5	0.34	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)

BQL - Below Quantification Limit; Avg. - Average; NS- Not Specified

Norms- As per national Ambient Air Quality Standards

Analyes By

Shiyal Kishor
Shiyal Kishor



Approved By

Pankil Patel
Pankil Patel

END

GO Green Mechanisms Pvt Ltd
Analysis Results For The Month of November-2022
On Site 24 Hourly Monitoring Results

Company Name		Mahan Energen Limited												
Sample Type		AMBIENT AIR QUALITY MONITORING												
Sample Description		Near Gate No - 02												
Sr. No	Parameters	PM (<10)	PM (<2.5)	SO ₂	NO ₂	Mercury(Hg)	O ₃	NH ₃	CO	Benzene	Benzo (a) Pyrene	Pb	Ni	As
	Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	ng/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ⁴	ng/m ⁵	µg/m ⁴	ng/m ⁵	ng/m ⁵
	Reference Method	IS 5182 part-23	GGMPL/SOP/AA/60	IS 5182 Part-2	IS 5182 Part-6	Method IO-3.4	IS 5182 Part-9	GGMPL/SOP/A A/62	IS 5182 Part-10	IS 5182 Part-11	IS 5182 Part-12	Method IO 3.4	Method IO 3.4	Method IO 3.4
	Norms	100	60	80	80	NS	100	400	4	5	1	1	20	6
	Date of Monitoring													
1	01.11.2022	71.2	36.2	17.9	25.5	BQL (QL=1)	12.4	15.0	0.38	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
2	04.11.2022	69.8	34.6	18.5	24.7	BQL(QL=1)	10.4	13.5	0.33	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
3	07.11.2022	72.8	36.2	16.5	24.2	BQL (QL=1)	13.5	15.4	0.35	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
4	10.11.2022	74.2	37.1	17.2	23.1	BQL (QL=1)	14.6	14.2	0.38	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
5	14.11.2022	76.1	32.9	19.2	23.9	BQL (QL=1)	12.7	15.1	0.36	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
6	17.11.2022	74.3	35.8	16.9	25.6	BQL(QL=1)	13.5	14.0	0.34	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
7	21.11.2022	68.7	33.3	16.9	24.4	BQL (QL=1)	11.6	14.6	0.37	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
8	24.11.2022	72.5	37.1	16.8	28.8	BQL (QL=1)	10.9	14.1	0.36	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
9	27.11.2022	70.6	31.2	17.4	23.3	BQL (QL=1)	12.4	14.8	0.38	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
AVERAGE		72.2	34.9	17.5	24.8	BQL(QL=1)	12.4	14.5	0.36	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)

BQL - Below Quantification Limit; Avg. - Average; NS- Not Specified

Norms- As per national Ambient Air Quality Standards

Analysed By

Shiyal K.B.
Shiyal Kishor



Approved By

Pankil Patel
Pankil Patel

.....END.....

GO Green Mechanisms Pvt Ltd
Analysis Results For The Month of November-2022
On Site 24 Hourly Monitoring Results

Company Name		Mahan Energen Limited												
Sample Type		AMBIENT AIR QUALITY MONITORING												
Sample Description		Near Gate No-03												
Sr. No	Parameters	PM (<10)	PM (<2.5)	SO ₂	NO ₂	Mercury(Hg)	O ₃	NH ₃	CO	Benzene	Benzo (a) Pyrene	Pb	Ni	As
	Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	ng/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ⁴	ng/m ⁵	µg/m ⁴	ng/m ⁵	ng/m ⁵
	Reference Method	IS 5182 part-23	GGMPL/SOP/AA/60	IS 5182 Part-2	IS 5182 Part-6	Method IO-3.4	IS 5182 Part-9	GGMPL/SOP/A/62	IS 5182 Part-10	IS 5182 Part-11	IS 5182 Part-12	Method IO 3.4	Method IO 3.4	Method IO 3.4
	Norms	100	60	80	80	NS	100	400	4	5	1	1	20	6
	Date of Monitoring													
1	01.11.2022	52.6	23.7	14.3	20.5	BQL(QL=1)	13.4	12.8	0.41	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
2	04.11.2022	54.2	24.6	16.3	23.4	BQL(QL=1)	12.8	13.5	0.42	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
3	07.11.2022	51.3	26.7	15.5	21.7	BQL(QL=1)	12.4	14.6	0.43	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
4	10.11.2022	57.0	30.0	14.5	22.4	BQL(QL=1)	10.5	11.6	0.41	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
5	14.11.2022	55.8	27.1	13.4	19.5	BQL(QL=1)	9.1	13.4	0.40	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
6	17.11.2022	54.3	28.7	17.4	22.4	BQL(QL=1)	10.1	11.3	0.41	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
7	21.11.2022	50.6	24.6	16.5	26.6	BQL(QL=1)	14.6	13.4	0.42	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
8	24.11.2022	54.9	28.3	14.3	23.2	BQL(QL=1)	13.4	10.4	0.42	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
9	27.11.2022	51.7	29.6	15.8	21.7	BQL(QL=1)	13.4	12.4	0.41	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
AVERAGE		53.6	27.0	15.3	22.4	BQL(QL=1)	12.2	12.6	0.41	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)

BQL - Below Quantification Limit; Avg. - Average; NS- Not Specified

Norms- As per national Ambient Air Quality Standards

Analyses By

Shiyal Kishor
 Shiyal Kishor



Approved By

Pankil Patel
 Pankil Patel

.....END.....

GO Green Mechanisms Pvt Ltd						
Analysis Results For The Month of December- 2022						
On Site 24 Hourly Monitoring Results						
Company Name		Mahan Energen Limited				
Sample Type		Ambient Air Quality Monitoring				
Sample Collected By		Laboratory Representative				
Sample Description		Near Admin Building				
Sr. No	Parameters	PM (<10)	PM (<2.5)	SO ₂	NO ₂	Mercury(Hg)
	Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	ng/m ³
	Reference Method	IS 5182 part-23	GGMPL/SOP/AA/60	IS 5182 Part-2	IS 5182 Part-6	Method IO-3.4
	Norms	100	60	80	80	NS
	Date of Monitoring					
1	01.12.2022	61.3	29.8	13.5	24.6	BQL(QL=1)
2	05.12.2022	69.9	31.4	14.9	23.3	BQL(QL=1)
3	08.12.2022	65.8	34.1	18.7	25.7	BQL(QL=1)
4	12.12.2022	68.1	32.6	12.8	26.9	BQL(QL=1)
5	15.12.2022	70.6	36.7	15.9	24.6	BQL(QL=1)
6	19.12.2022	66.9	34.6	16.9	21.3	BQL(QL=1)
7	22.12.2022	62.8	28.2	14.6	26.8	BQL(QL=1)
8	26.12.2022	63.4	30.7	15.6	22.4	BQL(QL=1)
9	29.12.2022	67.3	33.4	16.5	20.7	BQL(QL=1)
AVERAGE		66.2	32.4	15.5	24.0	BQL (QL=1)

BQL - Below Quantification Limit; Avg. - Average; NS- Not Specified

Norms- As per national Ambient Air Quality Standards

Analyses By

Shiyal Kishor
Shiyal Kishor



Approved By

Pankil Patel

Pankil Patel

.....END.....

GO Green Mechanisms Pvt Ltd						
Analysis Results For The Month of December -22						
On Site 24 Hourly Monitoring Results						
Company Name		Mahan Energen Limited				
Sample Type		Ambient Air Quality Monitoring				
Sample Collected By		Laboratory Representative				
Sample Description		Near Gate No - 02				
Sr. No	Parameters	PM (<10)	PM (<2.5)	SO ₂	NO ₂	Mercury(Hg)
	Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	ng/m ³
	Reference Method	IS 5182 part-23	GGMPL/SOP/AA/60	IS 5182 Part-2	IS 5182 Part-6	Method IO-3.4
	Norms	100	60	80	80	NS
	Date of Monitoring					
1	01.12.2022	73.6	33.6	18.4	24.1	BQL (QL=1)
2	05.12.2022	74.9	34.8	17.8	20.6	BQL(QL=1)
3	08.12.2022	68.2	32.9	20.7	23.8	BQL (QL=1)
4	12.12.2022	64.9	31.8	17.6	26.9	BQL (QL=1)
5	15.12.2022	70.4	32.9	21.5	28.1	BQL (QL=1)
6	19.12.2022	64.3	36.7	15.9	25.4	BQL(QL=1)
7	22.12.2022	72.1	34.2	17.4	23.4	BQL (QL=1)
8	26.12.2022	73.9	30.7	18.7	25.9	BQL (QL=1)
9	29.12.2022	66.4	36.8	15.3	27.7	BQL (QL=1)
AVERAGE		69.9	33.8	18.1	25.1	BQL (QL=1)

BQL - Below Quantification Limit; Avg. - Average; NS- Not Specified

Norms- As per national Ambient Air Quality Standards

Analyses By  Shiyal Kishor		Approved By  Pankil Patel
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.....END.....

GO Green Mechanisms Pvt Ltd

Analysis Results For The Month of December -22

On Site 24 Hourly Monitoring Results

Company Name		Mahan Energen Limited				
Sample Type		Ambient Air Quality Monitoring				
Sample Collected By		Laboratory Representative				
Sample Description		Near Gate No-03				
Sr. No	Parameters	PM (<10)	PM (<2.5)	SO₂	NO₂	Mercury(Hg)
	Unit	µg/m³	µg/m³	µg/m³	µg/m³	ng/m³
	Reference Method	IS 5182 part-23	GGMPL/SOP/AA/60	IS 5182 Part-2	IS 5182 Part-6	Method IO-3.4
	Norms	100	60	80	80	NS
	Date of Monitoring					
1	01.12.2022	49.5	21.6	10.2	19.6	BQL(QL=1)
2	05.12.2022	48.2	24.8	13.6	21.8	BQL(QL=1)
3	08.12.2022	52.6	26.4	14.8	23.6	BQL(QL=1)
4	12.12.2022	57.9	27.6	10.9	24.7	BQL(QL=1)
5	15.12.2022	46.9	25.8	15.8	20.5	BQL(QL=1)
6	19.12.2022	46.7	22.5	13.2	17.6	BQL(QL=1)
7	22.12.2022	43.6	26.9	12.4	19.7	BQL(QL=1)
8	26.12.2022	52.6	28.4	11.5	16.8	BQL(QL=1)
9	29.12.2022	55.6	23.4	15.8	19.5	BQL(QL=1)
AVERAGE		50.4	25.3	13.1	20.4	BQL (QL=1)

BQL - Below Quantification Limit; Avg. - Average; NS- Not Specified

Norms- As per national Ambient Air Quality Standards

Analyses By

Shiyuk B.
Shiyal Kishor



Approved By

Pankil Patel
Pankil Patel

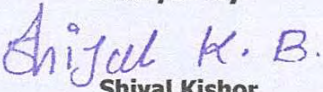


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GO Green Mechanisms Pvt Ltd
Analysis Results For The Month of January -2023
On Site 24 Hourly Monitoring Results

Company Name		Mahan Energen Limited				
Sample Type		Ambient Air Quality Monitoring				
Sample Collected By		Laboratory Representative				
Sample Description		Near Gate No-03				
Sr. No	Parameters	PM (<10)	PM (<2.5)	SO₂	NO₂	Mercury(Hg)
	Unit	µg/m³	µg/m³	µg/m³	µg/m³	ng/m³
	Reference Method	IS 5182 part-23	GGMPL/SOP/AA/60	IS 5182 Part-2	IS 5182 Part-6	Method IO-3.4
	Norms	100	60	80	80	NS
	Date of Monitoring					
1	02-01-2023	55.6	30.8	13.9	22.4	BQL(QL=1)
2	05-01-2023	53.3	27.1	15.6	24.1	BQL(QL=1)
3	09-01-2023	56.3	32.1	16.2	24.4	BQL(QL=1)
4	12-01-2023	50.1	28.7	12.7	22.6	BQL(QL=1)
5	16-01-2023	53.8	31.7	17.5	24.6	BQL(QL=1)
6	19-01-2023	50.8	28.3	16.1	22.9	BQL(QL=1)
7	23-01-2023	47.8	24.6	14.7	22.1	BQL(QL=1)
8	26-01-2023	48.2	25.8	13.2	19.4	BQL(QL=1)
9	30-01-2023	57.9	31.2	15.6	23.1	BQL(QL=1)
AVERAGE		52.6	28.9	15.0	22.8	BQL (QL=1)

BQL - Below Quantification Limit; Avg. - Average; NS- Not Specified

Norms- As per national Ambient Air Quality Standards

Analyses By  Shiyal Kishor		Approved By  Pankil Patel
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.....**END**.....

GO Green Mechanisms Pvt Ltd						
Analysis Results For The Month of January -2023						
On Site 24 Hourly Monitoring Results						
Company Name		Mahan Energen Limited				
Sample Type		Ambient Air Quality Monitoring				
Sample Collected By		Laboratory Representative				
Sample Description		Near Gate No - 02				
Sr. No	Parameters	PM (<10)	PM (<2.5)	SO ₂	NO ₂	Mercury(Hg)
	Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	ng/m ³
	Reference Method	IS 5182 part-23	GGMPL/SOP/AA/60	IS 5182 Part-2	IS 5182 Part-6	Method IO-3.4
	Norms	100	60	80	80	NS
	Date of Monitoring					
1	02-01-2023	74.7	39.6	20.3	26.6	BQL (QL=1)
2	05-01-2023	77.6	41.7	19.8	23.9	BQL(QL=1)
3	09-01-2023	66.9	35.4	17.3	24.9	BQL (QL=1)
4	12-01-2023	72.9	33.3	15.5	23.2	BQL (QL=1)
5	16-01-2023	66.1	36.7	16.5	25.7	BQL (QL=1)
6	19-01-2023	71.3	32.5	13.7	23.6	BQL (QL=1)
7	23-01-2023	68.7	37.9	15.3	24.6	BQL (QL=1)
8	26-01-2023	76.2	39.6	16.8	23.9	BQL (QL=1)
9	30-01-2023	63.5	34.6	17.8	25.5	BQL (QL=1)
AVERAGE		70.9	36.8	17.0	24.7	BQL (QL=1)

BQL - Below Quantification Limit; Avg. - Average; NS- Not Specified

Norms- As per national Ambient Air Quality Standards

Analyses By  Shiyal Kishor		Approved By  Pankil Patel
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GO Green Mechanisms Pvt Ltd
Analysis Results For The Month of January - 2023
On Site 24 Hourly Monitoring Results

Company Name		Mahan Energen Limited				
Sample Type		Ambient Air Quality Monitoring				
Sample Collected By		Laboratory Representative				
Sample Description		Near Admin Building				
Sr. No	Parameters	PM (<10)	PM (<2.5)	SO₂	NO₂	Mercury(Hg)
	Unit	µg/m³	µg/m³	µg/m³	µg/m³	ng/m³
	Reference Method	IS 5182 part-23	GGMPL/SOP/AA/60	IS 5182 Part-2	IS 5182 Part-6	Method IO-3.4
	Norms	100	60	80	80	NS
	Date of Monitoring					
1	02-01-2023	65.55	35.83	16.28	25.18	BQL(QL=1)
2	05-01-2023	73.97	38.74	14.88	23.88	BQL(QL=1)
3	09-01-2023	68.16	36.66	15.86	23.22	BQL(QL=1)
4	12-01-2023	63.59	33.74	14.50	24.34	BQL(QL=1)
5	16-01-2023	73.52	37.49	13.00	24.62	BQL(QL=1)
6	19-01-2023	70.82	37.08	14.66	25.62	BQL(QL=1)
7	23-01-2023	66.38	33.74	16.50	24.89	BQL(QL=1)
8	26-01-2023	67.94	36.24	13.57	20.04	BQL(QL=1)
9	30-01-2023	65.24	34.16	14.16	20.59	BQL(QL=1)
AVERAGE		68.4	36.0	14.8	23.6	BQL (QL=1)

BQL - Below Quantification Limit; Avg. - Average; NS- Not Specified
Norms- As per national Ambient Air Quality Standards

Analyses By  Shiyal Kishor		Approved By  Pankil Patel
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.....END.....

GO Green Mechanisms Pvt Ltd
 Analysis Results For The Month of February -2023
 On Site 24 Hourly Monitoring Results

Company Name		Mahan Energen Limited												
Sample Type		AMBIENT AIR QUALITY MONITORING												
Sample Description		Near Admin Building												
Sr. No	Parameters	PM (<10)	PM (<2.5)	SO ₂	NO ₂	Mercury(Hg)	O ₃	NH ₃	CO	Benzene	Benzo (a) Pyrene	Pb	Ni	As
	Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	ng/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	ng/m ³	µg/m ³	ng/m ³	ng/m ³
	Reference Method	IS 5182 part-23	GGMPL/SOP/AA/60	IS 5182 Part-2	IS 5182 Part-6	Method IO-3.4	IS 5182 Part-9	GGMPL/SOP/A/A/62	IS 5182 Part-10	IS 5182 Part-11	IS 5182 Part-12	Method IO 3.4	Method IO 3.4	Method IO 3.4
	Norms	100	60	80	80	NS	100	400	4	5	1	1	20	6
Date of Monitoring														
1	02-02-2023	60.2	33.7	14.4	22.7	BQL(QL=1)	13.8	11.1	0.36	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
2	06-02-2023	67.3	36.2	17.3	26.6	BQL(QL=1)	12.6	10.2	0.35	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
3	09-02-2023	68.5	36.2	15.6	20.7	BQL(QL=1)	11.6	11.1	0.34	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
4	13-02-2023	70.5	39.6	13.9	21.0	BQL(QL=1)	14.2	12.6	0.29	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
5	16-02-2023	71.9	40.0	15.0	25.5	BQL(QL=1)	15.8	13.9	0.32	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
6	20-02-2023	73.1	40.5	14.3	22.4	BQL(QL=1)	13.9	12.9	0.33	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
7	23-02-2023	69.5	38.7	13.3	23.0	BQL(QL=1)	13.6	13.2	0.28	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
8	27-02-2023	64.57	37.9	12.4	23.1	BQL(QL=1)	14.5	13.5	0.31	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
AVERAGE		68.7	37.9	14.5	23.1	BQL(QL=1)	13.8	12.3	0.32	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)

BQL - Below Quantification Limit; Avg. - Average; NS- Not Specified

Norms- As per national Ambient Air Quality Standards

Analysed By  Shiyai Kishor	 Approved By  Pankil Patel
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END

GO Green Mechanisms Pvt Ltd
Analysis Results For The Month of February-2023
On Site 24 Hourly Monitoring Results

Company Name		Mahan Energen Limited												
Sample Type		AMBIENT AIR QUALITY MONITORING												
Sample Description		Near Gate No - 02												
Sr. No	Parameters	PM (<10)	PM (<2.5)	SO ₂	NO ₂	Mercury(Hg)	O3	NH3	CO	Benzene	Benzo (a) Pyrene	Pb	Ni	As
	Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	ng/m3	µg/m ³	µg/m ³	mg/m ³	µg/m3	ng/m3	µg/m3	ng/m3	ng/m3
	Reference Method	IS 5182 part-23	GGMPL/SOP/AA/60	IS 5182 Part-2	IS 5182 Part-6	Method IO-3.4	IS 5182 Part-9	GGMPL/SOP/A A/62	IS 5182 Part-10	IS 5182 Part-11	IS 5182 Part-12	Method IO 3.4	Method IO 3.4	Method IO 3.4
	Norms	100	60	80	80	NS	100	400	4	5	1	1	20	6
Date of Monitoring														
1	02-02-2023	69.8	38.3	17.8	24.1	BQL (QL=1)	13.1	14.3	0.36	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
2	06-02-2023	74.6	41.7	16.7	26.0	BQL (QL=1)	11.0	12.2	0.31	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
3	09-02-2023	64.9	36.9	15.5	25.0	BQL(QL=1)	11.6	11.5	0.32	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
4	13-02-2023	67.2	37.1	14.1	21.9	BQL (QL=1)	12.7	14.9	0.33	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
5	16-02-2023	71.0	39.2	13.7	22.7	BQL (QL=1)	13.2	13.2	0.37	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
6	20-02-2023	69.9	38.3	11.8	21.7	BQL (QL=1)	13.9	12.4	0.36	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
7	23-02-2023	70.2	40.8	16.1	27.2	BQL (QL=1)	12.3	11.8	0.39	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
8	27-02-2023	73.3	42.1	15.1	25.5	BQL (QL=1)	15.5	12.4	0.35	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
AVERAGE		70.1	39.3	15.1	24.3	BQL(QL=1)	12.9	12.8	0.35	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)

BQL - Below Quantification Limit; Avg. - Average; NS- Not Specified

Norms- As per national Ambient Air Quality Standards

Analyses By

Shiyal Kishor
 Shiyal Kishor



Approved By

Pankil Patel
 Pankil Patel

.....END.....

GO Green Mechanisms Pvt Ltd
Analysis Results For The Month of February-2023
On Site 24 Hourly Monitoring Results

Company Name		Mahan Energen Limited												
Sample Type		AMBIENT AIR QUALITY MONITORING												
Sample Description		Near Gate No-03												
Sr. No	Parameters	PM (<10)	PM (<2.5)	SO ₂	NO ₂	Mercury(Hg)	O3	NH3	CO	Benzene	Benzo (a) Pyrene	Pb	Ni	As
	Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	ng/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	ng/m ³	µg/m ³	ng/m ³	ng/m ³
	Reference Method	IS 5182 part-2.3	GGMPL/SOP/AA/60	IS 5182 Part-2	IS 5182 Part-6	Method IO-3.4	IS 5182 Part-9	GGMPL/SOP/A A/62	IS 5182 Part-10	IS 5182 Part-11	IS 5182 Part-12	Method IO 3.4	Method IO 3.4	Method IO 3.4
	Norms	100	60	80	80	NS	100	400	4	5	1	1	20	6
	Date of Monitoring													
1	02-02-2023	58.9	33.3	15.1	24.7	BQL(QL=1)	12.4	13.4	0.39	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
2	06-02-2023	56.4	30.8	13.5	21.3	BQL(QL=1)	12.0	12.7	0.38	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
3	09-02-2023	57.0	31.8	14.5	19.4	BQL(QL=1)	10.3	11.5	0.33	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
4	13-02-2023	59.5	32.1	18.0	26.0	BQL(QL=1)	12.1	13.4	0.40	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
5	16-02-2023	51.4	29.2	14.1	21.7	BQL(QL=1)	10.2	11.2	0.37	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
6	20-02-2023	52.7	32.2	15.3	23.3	BQL(QL=1)	12.3	10.1	0.34	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
7	23-02-2023	49.7	28.7	16.0	24.7	BQL(QL=1)	12.6	14.2	0.32	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
8	27-02-2023	52.5	29.6	15.5	22.7	BQL(QL=1)	13.6	11.8	0.34	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)
AVERAGE		54.8	31.0	15.2	23.0	BQL(QL=1)	11.9	12.3	0.36	BQL(QL=2.5)	BQL(QL=0.5)	BQL(QL=0.001)	BQL(QL=5)	BQL(QL=1)

BQL - Below Quantification Limit; Avg. - Average; NS- Not Specified

Norms- As per national Ambient Air Quality Standards

Analyses By

Shiyal K. B.
Shiyal Kishor



Approved By

P
Pankil Patel

.....END.....

GO Green Mechanisms Pvt Ltd
Analysis Results For The Month of March-2023
On Site 24 Hourly Monitoring Results

Company Name		Mahan Energen Limited				
Sample Type		AMBIENT AIR QUALITY MONITORING				
Sample Description		Near Admin Building				
Sr. No	Parameters	PM (<10)	PM (<2.5)	SO₂	NO₂	Mercury(Hg)
	Unit	µg/m³	µg/m³	µg/m³	µg/m³	ng/m³
	Reference Method	IS 5182 part-23	GGMPL/SOP/AA/60	IS 5182 Part-2	IS 5182 Part-6	Method IO-3.4
	Norms	100	60	80	80	NS
	Date of Monitoring					
1	02-03-2023	63.9	36.7	12.6	19.6	BQL(QL=1)
2	06-03-2023	73.7	41.7	14.5	25.6	BQL(QL=1)
3	09-03-2023	66.7	35.4	13.9	18.1	BQL(QL=1)
4	13-03-2023	69.1	39.6	15.9	19.2	BQL(QL=1)
5	16-03-2023	65.8	40.8	14.1	27.6	BQL(QL=1)
6	20-03-2023	74.4	44.8	16.7	22.7	BQL(QL=1)
7	23-03-2023	70.2	38.7	13.8	22.7	BQL(QL=1)
8	27-03-2023	69.7	37.9	13.5	21.5	BQL(QL=1)
9	30-03-2023	68.7	38.3	11.3	22.5	BQL(QL=1)
AVERAGE		69.1	39.3	14.0	22.2	BQL (QL=1)

BQL - Below Quantification Limit; Avg. - Average; NS- Not Specified

Norms- As per national Ambient Air Quality Standards

Analyses By <i>Shiyal Kishor</i> Shiyal Kishor		Approved By <i>Pankil Patel</i> Pankil Patel
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GO Green Mechanisms Pvt Ltd						
Analysis Results For The Month of March-2023						
On Site 24 Hourly Monitoring Results						
Company Name		Mahan Energen Limited				
Sample Type		AMBIENT AIR QUALITY MONITORING				
Sample Description		Near Gate No - 02				
Sr. No	Parameters	PM (<10)	PM (<2.5)	SO ₂	NO ₂	Mercury(Hg)
	Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	ng/m ³
	Reference Method	IS 5182 part-23	GGMPL/SOP/AA/60	IS 5182 Part-2	IS 5182 Part-6	Method IO-3.4
	Norms	100	60	80	80	NS
	Date of Monitoring					
1	02-03-2023	65.7	36.6	15.1	20.9	BQL (QL=1)
2	06-03-2023	70.1	39.2	17.1	28.1	BQL (QL=1)
3	09-03-2023	64.9	34.6	13.1	21.0	BQL(QL=1)
4	13-03-2023	69.5	38.7	11.9	20.4	BQL(QL=1)
5	16-03-2023	75.5	40.4	15.4	25.9	BQL(QL=1)
6	20-03-2023	70.6	43.7	14.3	22.4	BQL(QL=1)
7	23-03-2023	74.3	40.1	15.2	25.9	BQL(QL=1)
8	27-03-2023	71.2	39.2	15.3	23.6	BQL (QL=1)
9	30-03-2023	67.5	37.9	13.4	27.3	BQL (QL=1)
AVERAGE		69.9	38.9	14.5	23.9	BQL (QL=1)

BQL - Below Quantification Limit; Avg. - Average; NS- Not Specified

Norms- As per national Ambient Air Quality Standards

Analyses By  Shiyal Kishor		Approved By  Pankil Patel
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GO Green Mechanisms Pvt Ltd

Analysis Results For The Month of March-2023

On Site 24 Hourly Monitoring Results

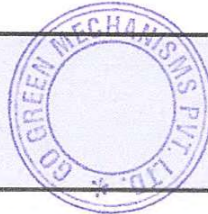
Company Name		Mahan Energen Limited				
Sample Type		AMBIENT AIR QUALITY MONITORING				
Sample Description		Near Gate No-03				
Sr. No	Parameters	PM (<10)	PM (<2.5)	SO₂	NO₂	Mercury(Hg)
	Unit	µg/m³	µg/m³	µg/m³	µg/m³	ng/m3
	Reference Method	IS 5182 part-23	GGMPL/SOP/AA/60	IS 5182 Part-2	IS 5182 Part-6	Method IO-3.4
	Norms	100	60	80	80	NS
	Date of Monitoring					
1	02-03-2023	54.7	31.7	13.7	26.1	BQL(QL=1)
2	06-03-2023	61.4	33.3	15.2	18.7	BQL(QL=1)
3	09-03-2023	62.9	35.0	16.2	22.7	BQL(QL=1)
4	13-03-2023	57.1	37.4	16.7	23.8	BQL(QL=1)
5	16-03-2023	56.6	32.1	13.1	21.6	BQL(QL=1)
6	20-03-2023	54.1	29.6	17.1	25.6	BQL(QL=1)
7	23-03-2023	49.4	26.7	15.9	28.2	BQL(QL=1)
8	27-03-2023	55.4	30.8	16.9	25.0	BQL(QL=1)
9	30-03-2023	57.7	31.7	14.7	23.0	BQL(QL=1)
AVERAGE		56.6	32.0	15.5	23.9	BQL(QL=1)

BQL - Below Quantification Limit; Avg. - Average; NS- Not Specified

Norms- As per national Ambient Air Quality Standards

Analyses By

Shiyu K.B.
Shiyal Kishor



Approved By

P
Pankil Patel

END

GO Green Mechanisms Pvt Ltd

Analysis Result for the Month of October 2022

Company Name		Mahan Energen Limited				
Sample Type		Stack Emission				
Stack Attached To		Boiler				
Stack Hihgt & Dia (m)		275 & 6.9				
Date of Sampling		-	20.10.2022			
Sr. No.	Parameters	Result (Unit1)	Results (Unit2)	Unit	Reference Method	Limit (mg/Nm3)
1	Flue Gas Temperature	-	122.0	°c	IS 11255 Part-3	-
2	Barometric Pressure	-	749.0	mmHg	GGMPL/SOP/MP/01	-
3	Velocity	-	18.72	m/s	IS 11255 Part-3	-
4	Volumetric Flow Rate	-	699.64	Nm3/s	IS 11255 Part-3	-
5	Particulate Matter (PM)	-	28.56	mg/Nm ³	IS 11255 Part-1	50
6	Sulphur Dioxide (SO ₂)	-	734.0	mg/Nm ³	GGMPL/SOP/SEA/68	-
7	Oxides of Nitrogen(NOx)	-	288.00	mg/Nm ³	GGMPL/SOP/SEA/68	450
8	Mercury as Hg	-	BQL(QL=0.01)	mg/Nm ³	EPA Method 21	0.03

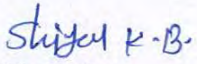


BQL= Below Quantification Limit

Limit as per Thermal Power Plant MoEF Gazzate 2015.

Analysed By  Shiyal Kishor		Approved By  Pankil Patel
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END

GO Green Mechanisms Pvt Ltd						
Analysis Result for the Month of November -2022						
Company Name		Mahan Energen Limited				
Sample Type		Stack Emission				
Stack Attached To		Boiler				
Stack Hihgt & Dia (m)		275 & 6.9				
Date of Sampling		26.11.2022	08.11.2022			
Sr. No.	Parameters	Result (Unit1)	Results (Unit2)	Unit	Reference Method	Limit (mg/Nm3)
1	Flue Gas Temperature	118.00	129.00	°C	IS 11255 Part-3	-
2	Barometric Pressure	745.00	749.00	mmHg	GGMPL/SOP/MP/01	-
3	Velocity	25.35	26.12	m/s	IS 11255 Part-3	-
4	Volumetric Flow Rate	947.43	976.20	Nm3/s	IS 11255 Part-3	-
5	Particulate Matter (PM)	35.23	38.24	mg/Nm ³	IS 11255 Part-1	100
6	Sulphur Dioxide (SO ₂)	746.78	782.18	mg/Nm ³	GGMPL/SOP/SEA/68	200
7	Oxides of Nitrogen(NOx)	356.94	381.49	mg/Nm ³	GGMPL/SOP/SEA/68	600
8	Mercury as Hg	BQL(QL=0.01)	BQL(QL=0.01)	mg/Nm ³	EPA Method 21	0.03

BQL= Below Quantification Limit		
Limit as per Thermal Power Plant Gazzate 2015		
Analysed By  Shiyal Kishor		Approved By  Pankil Patel
END		

GO Green Mechanisms Pvt Ltd

Analysis Result for the Month of December- 2022

Company Name		Mahan Energen Limited				
Sample Type		Stack Emission				
Stack Attached To		Boiler				
Stack Hihgt & Dia (m)		275 & 6.9				
Monitoring Platform		105 mtr				
Area of Stack		37.37 m2				
Date of Sampling		17.12.2022				
Sample Collected By		Laboratory Representative				
Sr. No.	Parameters	Result (Unit1)	Results (Unit2)	Unit	Reference Method	Limit (mg/Nm3)
1	Stack Temperature	129.0	-	°C	IS 11255 Part-3	-
2	Barometric Pressure	745.0	-	mmHg	GGMPL/SOP/MP/01	-
3	Velocity	25.25	-	m/s	IS 11255 Part-3	-
4	Volumetric Flow Rate	943.69	-	Nm3/s	IS 11255 Part-3	-
5	Particulate Matter (PM)	36.84	-	mg/Nm ³	IS 11255 Part-1	50
6	Sulphur Dioxide (SO ₂)	769.75	-	mg/Nm ³	GGMPL/SOP/SEA/68	200
7	Oxides of Nitrogen(NOx)	397.41	-	mg/Nm ³	GGMPL/SOP/SEA/68	450
8	Mercury as Hg	BQL(QL=0.01)	-	mg/Nm ³	EPA Method 21	0.03

BQL= Below Quantification Limit

Limit as per Thermal Power Plant Gazzate 2015

Analysed By  Shiyal Kishor		Approved By  Pankil Patel
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END

GO Green Mechanisms Pvt Ltd

Analysis Result for the Month of January- 2023

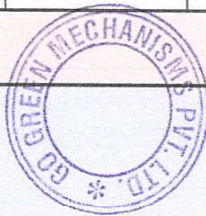
Company Name	Mahan Energen Limited					
Sample Type	Stack Emission					
Stack Attached To	Boiler					
Stack Hihgt & Dia (m)	275 & 6.9					
Monitoring Platform	105 mtr					
Area of Stack	37.37 m2					
Date of Sampling	31.01.2023					
Sample Collected By	Laboratory Representative					
Sr. No.	Parameters	Result (Unit1)	Results (Unit2)	Unit	Reference Method	Limit (mg/Nm3)
1	Stack Temperature	127.4	124.7	°C	IS 11255 Part-3	-
2	Barometric Pressure	752.0	753.0	mmHg	GGMPL/SOP/MP/01	-
3	Velocity	25.9	26.5	m/s	IS 11255 Part-3	-
4	Volumetric Flow Rate	967.98	990.41	Nm3/s	IS 11255 Part-3	-
5	Particulate Matter (PM)	31.94	35.50	mg/Nm ³	IS 11255 Part-1	50
6	Sulphur Dioxide (SO ₂)	748.00	762.0	mg/Nm ³	GGMPL/SOP/SEA/68	200
7	Oxides of Nitrogen(NO _x)	326.00	368.0	mg/Nm ³	GGMPL/SOP/SEA/68	450
8	Mercury as Hg	BQL(QL=0.01)	BQL(QL=0.01)	mg/Nm ³	EPA Method 21	0.03

BQL= Below Quantification Limit

Limit as per Thermal Power Plant Gazzate 2015

Analysed By

Anil K. B.
Shiyal Kishor



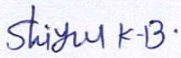

Approved By

Pankil Patel

Pankil Patel

END.

GO Green Mechanisms Pvt Ltd						
Analysis Result for the Month of February- 2023						
Company Name		Mahan Energen Limited				
Sample Type		Stack Emission				
Stack Attached To		Boiler				
Stack Hihgt & Dia (m)		275 & 6.9				
Monitoring Platform		105 mtr				
Area of Stack		37.37 m2				
Date of Sampling		21.02.2023				
Sample Collected By		Laboratory Representative				
Sr. No.	Parameters	Result (Unit1)	Results (Unit2)	Unit	Reference Method	Limit (mg/Nm3)
1	Stack Temperature	130.15	128.43	°C	IS 11255 Part-3	-
2	Barometric Pressure	765.00	764.00	mmHg	GGMPL/SOP/MP/01	-
3	Velocity	25.38	25.78	m/s	IS 11255 Part-3	-
4	Volumetric Flow Rate	948.55	963.50	Nm3/s	IS 11255 Part-3	-
5	Particulate Matter (PM)	34.04	38.33	mg/Nm ³	IS 11255 Part-1	50
6	Sulphur Dioxide (SO ₂)	726.44	743.60	mg/Nm ³	GGMPL/SOP/SEA/68	200
7	Oxides of Nitrogen(NOx)	293.15	311.60	mg/Nm ³	GGMPL/SOP/SEA/68	450
8	Mercury as Hg	BQL(QL=0.01)	BQL(QL=0.01)	mg/Nm ³	EPA Method 21	0.03

BQL= Below Quantification Limit	
Limit as per Thermal Power Plant Gazzate 2015	
Analysed By  Shiyal Kishor	Approved By  Pankil Patel

.....END.....



GO Green Mechanisms Pvt Ltd

Analysis Result for the Month of March- 2023

Company Name	Mahan Energen Limited
Sample Type	Stack Emission
Stack Attached To	Boiler
Stack Hihgt & Dia (m)	275 & 6.9
Monitoring Platform	105 mtr
Area of Stack	37.37 m2
Date of Sampling	21.03.2023
Sample Collected By	Laboratory Representative

Sr. No.	Parameters	Result (Unit1)	Results (Unit2)	Unit	Reference Method	Limit (mg/Nm3)
1	Stack Temperature	125.65	129.32	°C	IS 11255 Part-3	-
2	Barometric Pressure	765.00	765.00	mmHg	GGMPL/SOP/MP/01	-
3	Velocity	26.49	24.97	m/s	IS 11255 Part-3	-
4	Volumetric Flow Rate	990.03	933.23	Nm3/s	IS 11255 Part-3	-
5	Particulate Matter (PM)	39.64	42.56	mg/Nm ³	IS 11255 Part-1	50
6	Sulphur Dioxide (SO ₂)	817.00	780.78	mg/Nm ³	GGMPL/SOP/SEA/68	200
7	Oxides of Nitrogen(NO _x)	375.15	346.45	mg/Nm ³	GGMPL/SOP/SEA/68	450
8	Mercury as Hg	BQL(QL=0.01)	BQL(QL=0.01)	mg/Nm ³	EPA Method 21	0.03

BQL= Below Quantification Limit

Limit as per Thermal Power Plant Gazzate 2015

Analysed By

Shiyal K.B.
Shiyal Kishor

Approved By

P
Pankil Patel

END.



GO Green Mechnisms Pvt Ltd
Analysis Results for the Month of October 2022

Company Name	Mahan Energen Limited.
Sample Type	Ground Water
Sample Quantity	8L
Date of Sampling	15.10.2022
Analysis Period	18.10.2022 - 29.10.2022

Sl. No.	PARAMETER	UNIT	Location			Reference Method	As per IS:10500	
			Bandhaura Village	Raiffa Village	Karsuaraja Village		AL	PL
1	pH @ 25 °C	-	7.24	7.35	7.18	IS 3025-Part 11	6.5-8.5	No relaxation
2	Turbidity	NTU	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	APHA 23rd Edition (2130 B)	1	5
3	Total Dissolved Solids @ 180 °C	mg/L	485	499	628	APHA 23rd Edition (2540 C)	500	2000
4	Total Hardness as CaCO ₃	mg/L	392	212	195	APHA 23rd Edition (2340 C)	200	600
5	Alkalinity as CaCO ₃	mg/L	318	282	323	APHA 23rd Edition (2320 B)	200	600
6	Calcium as Ca	mg/L	122.24	62.52	63.73	APHA 23rd Edition (3120 B)	75	200
7	Magnesium (Mg)	mg/L	21.14	13.61	8.75	APHA 23rd Edition (3120 B)	30	10
8	Sulphate	mg/L	48.01	71.14	73.26	APHA 23rd Edition (4500 SO4 E)	200	400
9	Nitrate	mg/L	3.41	4.35	2.1	IS 3025 (Part 34)	45	No relaxation
10	Iron	mg/L	0.071	0.067	0.134	APHA 23rd Edition (3120 B)	0.3	No relaxation
11	Fluoride	mg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	APHA 23rd Edition (4500 F D)	1	1.5
12	Sulphide	mg/L	BQL(QL=0.2)	BQL(QL=0.2)	BQL(QL=0.2)	APHA 23rd Edition (4500 S2 F)	0.05	No relaxation
13	Zinc (Zn)	mg/L	0.102	0.121	1.044	APHA 23rd Edition (3120 B)	5	15
14	Chloride	mg/L	198.94	118.96	189.94	IS 3025-Part 32	250	1000
15	Residual Chlorine	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	APHA 23rd Edition (4500 Cl B)	0.2	1
16	Colour	Hazen	BQL(QL=1)	BQL(QL=1)	BQL(QL=1)	IS 3025 part 4	5	15
17	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025 part 5	Agreeable	Agreeable
18	Mineral Oil	mg/L	BQL(QL=1)	BQL(QL=1)	BQL(QL=1)	IS 3025 part 39	0.5	No relaxation
19	Ammonia	mg/L	2.8	1.68	2.2	APHA 23rd Edition (4500 NH3 C)	0.5	No relaxation
20	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025 Part-7	Agreeable	Agreeable
21	Chloramines as Cl2	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	IS 3025 (Pt 26)	4	No relaxation
22	Cyanide	mg/L	BQL(QL=0.025)	BQL(QL=0.025)	BQL(QL=0.025)	GGMPL/SOP/W/43	0.05	No relaxation
23	Aluminum (Al)	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	0.03	0.2
24	Arsenic (As)	mg/L	BQL(QL=0.005)	BQL(QL=0.005)	BQL(QL=0.005)	APHA 23rd Edition (3120 B)	0.01	0.05
25	Barium as Ba	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	0.7	No relaxation
26	Boron (B)	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	APHA 23rd Edition (3120 B)	0.5	1
27	Cadmium (Cd)	mg/L	BQL(QL=0.002)	BQL(QL=0.002)	BQL(QL=0.002)	APHA 23rd Edition (3120 B)	0.003	No relaxation
28	Copper (Cu)	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	0.05	1.5
29	Lead (Pb)	mg/L	BQL(QL=0.005)	BQL(QL=0.005)	BQL(QL=0.005)	APHA 23rd Edition (3120 B)	0.01	No relaxation
30	Manganese (Mn)	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	APHA 23rd Edition (3120 B)	0.1	0.3
31	Mercury (Hg)	mg/L	BQL(QL=0.0005)	BQL(QL=0.0005)	BQL(QL=0.0005)	APHA 23rd Edition (3120 B)	0.001	No relaxation
32	Selenium (Se)	mg/L	BQL(QL=0.005)	BQL(QL=0.005)	BQL(QL=0.005)	APHA 23rd Edition (3120 B)	0.01	No relaxation
33	Molybdenum as Mo	mg/L	BQL(QL=0.01)	BQL(QL=0.01)	BQL(QL=0.01)	APHA 23rd Edition (3120 B)	0.07	No relaxation
34	Total Chromium Cr	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	0.05	No relaxation
35	Nickel as (Ni)	mg/L	BQL(QL=0.01)	BQL(QL=0.01)	BQL(QL=0.01)	APHA 23rd Edition (3120 B)	0.2	No relaxation
36	Silver (Ag)	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	0.1	No relaxation
37	Anionic Detergent	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	IS 13428 (Annex K) : 2018	0.2	1



38	PAH						0.0001	No relaxation
38.1	Naphthalene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.2	1-Methylnapthalene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.3	2-Methylnapthalene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.4	Acenaphthylene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.5	Acenaphthene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.6	Fluorene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.7	Phenanthrene	µg/L	BQL(QL=5)	BQL(QL=5)	BQL(QL=5)	APHA 6440 B	-	-
38.8	Anthracene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.9	Fluoranthene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.10	Pyrene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.11	Benzo(a) anthracene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.12	Chrysene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.13	Benzo (b) fluoranthene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.14	Benzo(k) fluoranthene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.15	Benzo(a)pyrene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.16	Dibenzo(a,h)anthracene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.17	Benzo (g,h,i)perylene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.18	Indenol(1,2,3-cd)pyrene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
39	Polychlorinated biphenyls						0.0005	No relaxation
39.1	PCB 1016	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	-	-
39.2	PCB 1221	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	-	-
39.3	PCB 1232	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	-	-
39.4	PCB 1242	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	-	-
39.5	PCB 1248	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	-	-
39.6	PCB 1254	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	-	-
39.7	PCB 1260	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	-	-
40	Trihalomethanes							
40.1	Bromoform	mg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	APHA 6232	0.1	No relaxation
40.2	Dibromochloromethne	mg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	APHA 6232	0.1	No relaxation
40.3	Bromodichloromethane	mg/L	BQL(QL=0.06)	BQL(QL=0.06)	BQL(QL=0.06)	APHA 6232	0.06	No relaxation
40.4	Chloroform	mg/L	BQL(QL=0.2)	BQL(QL=0.2)	BQL(QL=0.2)	APHA 6232	0.2	No relaxation
41	Pesticides						Limits as Per IS:10500	
41.1	o,p-DDT	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	1	
41.2	p,p-DDT	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508		
41.3	o,p-DDE	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508		
41.4	p,p-DDE	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508		
41.5	o,p-DDD	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508		
41.6	p,p-DDD	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508		
41.7	Isoproturon	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 532		
41.8	Alachlor	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 525.2	20	
41.9	Atrazine	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 8141A	2	
41.10	Aldrin/Dieldrin	µg/L	BQL(QL=0.01)	BQL(QL=0.01)	BQL(QL=0.01)	USEPA 508	0.03	
41.11	Gamma-HCH(Lindane)	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 508	2	
41.12	Alpha HCH	µg/L	BQL(QL=0.005)	BQL(QL=0.005)	BQL(QL=0.005)	USEPA 508	0.01	
41.13	Beta HCH	µg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	USEPA 508	0.04	
41.14	Delta HCH	µg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	USEPA 508	0.04	
41.15	Endosulfan (alpha)	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	0.4	
41.16	Endosulfan (Beta)	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508		
41.17	Endosulfan (Sulphate)	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508		
41.18	Monocrotophos	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 8141A	1	
41.19	Ethoin	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	UEPA 1657A	3	
41.20	Chlorpyrifos	µg/L	BQL(QL=0.25)	BQL(QL=0.25)	BQL(QL=0.25)	USEPA 8141A	30	
41.21	Phorate	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 8141A	2	



41.22	Butachlor	µg/L	BQL(QL=20)	BQL(QL=20)	BQL(QL=20)	USEPA 8141A	125
41.23	Methyl Parathion	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 8141A	0.3
41.24	Malathion	µg/L	BQL(QL=0.25)	BQL(QL=0.25)	BQL(QL=0.25)	USEPA 8141A	190
42	Microbiological						Requirments as per IS:10500
42.1	E.Coli (MPN/100 ml)	MPN/100ml	Absent	Absent	Absent	IS 1622	Absent
42.2	Total Coliform	MPN/100ml	Absent	Absent	Absent	IS 1622	Absent

BQL = Below Quantification Limit; NA = Not Applicable

Analysed By:

Shivraj B. Shivraj Kishor

Approved By:

Dr. Pankil Patel



END

GO Green Mechanisms Pvt Ltd
Analysis Results for the Month of January-2023

Company Name	Mahan Energen Limited.
Sample Type	Ground Water
Sample Quantity	8L
Sample Collected By	Laboratory Representative
Date of Sampling	16.01.2023
Analysis Period	21.01.2023 to 28.01.2023

SL. No.	PARAMETER	UNIT	Location			Reference Method	As per IS:10500	
			Bandhaura Village	Railla Village	Karsuaraja Village		AL	PL
1	pH @ 25 °C	-	7.25	7.29	7.56	IS 3025-Part 11	6.5-8.5	No relaxation
2	Turbidity	NTU	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	APHA 23rd Edition (2130 B)	1	5
3	Total Dissolved Solids @ 180 °C	mg/L	612.0	506.0	589	APHA 23rd Edition (2540 C)	500	2000
4	Total Hardness as CaCO ₃	mg/L	360.0	210.0	295.0	APHA 23rd Edition (2340 C)	200	600
5	Alkalinity as CaCO ₃	mg/L	290.0	250.0	292.00	APHA 23rd Edition (2320 B)	200	600
6	Calcium as Ca	mg/L	106.21	56.11	68.14	APHA 23rd Edition (3120 B)	75	200
7	Magnesium (Mg)	mg/L	23.09	17.01	30.38	APHA 23rd Edition (3120 B)	30	10
8	Sulphate	mg/L	32.13	55.99	52.07	APHA 23rd Edition (4500 SO ₄ E)	200	400
9	Nitrate	mg/L	2.12	1.20	1.03	IS 3025 (Part 34)	45	No relaxation
10	Iron	mg/L	0.072	0.067	0.123	APHA 23rd Edition (3120 B)	0.3	No relaxation
11	Fluoride	mg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	APHA 23rd Edition (4500 F D)	1	1.5
12	Sulphide	mg/L	BQL(QL=0.2)	BQL(QL=0.2)	BQL(QL=0.2)	APHA 23rd Edition (4500 S2 F)	0.05	No relaxation
13	Zinc (Zn)	mg/L	0.113	0.121	1.028	APHA 23rd Edition (3120 B)	5	15
14	Chloride	mg/L	184.94	97.47	157.45	IS 3025-Part 32	250	1000
15	Residual Chlorine	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	APHA 23rd Edition (4500 Cl B)	0.2	1
16	Colour	Hazen	BQL(QL=1)	BQL(QL=1)	BQL(QL=1)	IS 3025 part 4	5	15
17	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025 part 5	Agreeable	Agreeable
18	Mineral Oil	mg/L	BQL(QL=1)	BQL(QL=1)	BQL(QL=1)	IS 3025 part 39	0.5	No relaxation
19	Ammonia	mg/L	BQL(QL=0.5)	BQL(QL=0.5)	BQL(QL=0.5)	APHA 23rd Edition (4500 NH ₃ C)	0.5	No relaxation
20	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025 Part-7	Agreeable	Agreeable
21	Chloramines as Cl ₂	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	IS 3025 (Pt 26)	4	No relaxation
22	Cyanide	mg/L	BQL(QL=0.025)	BQL(QL=0.025)	BQL(QL=0.025)	GGMPL/SOP/W/43	0.05	No relaxation
23	Aluminum (Al)	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	0.03	0.2
24	Arsenic (As)	mg/L	BQL(QL=0.005)	BQL(QL=0.005)	BQL(QL=0.005)	APHA 23rd Edition (3120 B)	0.01	0.05
25	Barium as Ba	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	0.7	No relaxation
26	Boron (B)	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	APHA 23rd Edition (3120 B)	0.5	1
27	Cadmium (Cd)	mg/L	BQL(QL=0.002)	BQL(QL=0.002)	BQL(QL=0.002)	APHA 23rd Edition (3120 B)	0.003	No relaxation
28	Copper (Cu)	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	0.05	1.5
29	Lead (Pb)	mg/L	BQL(QL=0.005)	BQL(QL=0.005)	BQL(QL=0.005)	APHA 23rd Edition (3120 B)	0.01	No relaxation
30	Manganese (Mn)	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	APHA 23rd Edition (3120 B)	0.1	0.3
31	Mercury (Hg)	mg/L	BQL(QL=0.0005)	BQL(QL=0.0005)	BQL(QL=0.0005)	APHA 23rd Edition (3120 B)	0.001	No relaxation
32	Selenium (Se)	mg/L	BQL(QL=0.005)	BQL(QL=0.005)	BQL(QL=0.005)	APHA 23rd Edition (3120 B)	0.01	No relaxation
33	Molybdenum as Mo	mg/L	BQL(QL=0.01)	BQL(QL=0.01)	BQL(QL=0.01)	APHA 23rd Edition (3120 B)	0.07	No relaxation
34	Total Chromium Cr	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	0.05	No relaxation
35	Nickel as (Ni)	mg/L	BQL(QL=0.01)	BQL(QL=0.01)	BQL(QL=0.01)	APHA 23rd Edition (3120 B)	0.2	No relaxation
36	Silver (Ag)	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	0.1	No relaxation
37	Anionic Detergent	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	IS 13428 (Annex K) : 2018	0.2	1
38	PAH						0.0001	No relaxation
38.1	Naphthalene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.2	1-Methylnaphthalene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.3	2-Methylnaphthalene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.4	Acenaphthylene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.5	Acenaphthene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.6	Fluorene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.7	Phenanthrene	µg/L	BQL(QL=5)	BQL(QL=5)	BQL(QL=5)	APHA 6440 B	-	-
38.8	Anthracene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.9	Fluoranthene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-
38.10	Pyrene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-

38.11	Benzo(a) anthracene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-	
38.12	Chrysene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-	
38.13	Benzo (b) fluoranthene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-	
38.14	Benzo(K) fluoranthene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-	
38.15	Benzo(a)pyrene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-	
38.16	Dibenzo(a,h)anthracene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-	
38.17	Benzo (g,h,i)perylene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-	
38.18	Indenol(1,2,3-cd)pyrene	µg/L	BQL(QL=10)	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-	-	
39	Polychlorinated biphenyles							0.0005	No relaxation
39.1	PCB 1016	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	-	-	
39.2	PCB 1221	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	-	-	
39.3	PCB 1232	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	-	-	
39.4	PCB 1242	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	-	-	
39.5	PCB 1248	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	-	-	
39.6	PCB 1254	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	-	-	
39.7	PCB 1260	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	-	-	
40	Trihalomethanes								
40.1	Bromoform	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	APHA 6232	0.1	No relaxation	
40.2	Dibromochloromethne	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	APHA 6232	0.1	No relaxation	
40.3	Bromodichloromethane	mg/L	BQL(QL=0.03)	BQL(QL=0.03)	BQL(QL=0.03)	APHA 6232	0.06	No relaxation	
40.4	Chloroform	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	APHA 6232	0.2	No relaxation	
41	Pesticides							Limits as Per IS:10500	
41.1	o,p-DDT	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	1		
41.2	p,p-DDT	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508			
41.3	o,p-DDE	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508			
41.4	p,p-DDE	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508			
41.5	o,p-DDD	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508			
41.6	p,p-DDD	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508			
41.7	Isoproturon	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 532			
41.8	Alachlor	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 525.2			20
41.9	Atrazine	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 8141A			2
41.10	Aldrin/Dieldrin	µg/L	BQL(QL=0.01)	BQL(QL=0.01)	BQL(QL=0.01)	USEPA 508			0.03
41.11	Gamma-HCH(Lindane)	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 508	2		
41.12	Alpha HCH	µg/L	BQL(QL=0.005)	BQL(QL=0.005)	BQL(QL=0.005)	USEPA 508	0.01		
41.13	Beta HCH	µg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	USEPA 508	0.04		
41.14	Delta HCH	µg/L	BQL(QL=0.02)	BQL(QL=0.02)	BQL(QL=0.02)	USEPA 508	0.04		
41.15	Endosulfan (alpha)	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	0.4		
41.16	Endosulfan (Beta)	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508			
41.17	Endosulfan (Sulphate)	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508			
41.18	Monocrotophos	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 8141A	1		
41.19	Ethoin	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	UEPA 1657A	3		
41.20	Chlorpyrifos	µg/L	BQL(QL=0.25)	BQL(QL=0.25)	BQL(QL=0.25)	USEPA 8141A	30		
41.21	Phorate	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 8141A	2		
41.22	Butachlor	µg/L	BQL(QL=20)	BQL(QL=20)	BQL(QL=20)	USEPA 8141A	125		
41.23	Methyl Parathion	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 8141A	0.3		
41.24	Malathion	µg/L	BQL(QL=0.25)	BQL(QL=0.25)	BQL(QL=0.25)	USEPA 8141A	190		
42	Microbiological							Requirments as per IS:10500	
42.1	E.Coli (MPN/100 ml)	MPN/100ml	Absent	Absent	Absent	IS 1622	Absent		
42.2	Total Coliform	MPN/100ml	Absent	Absent	Absent	IS 1622	Absent		

BQL =Below Quantification Limit; NA = Not Applicable

Analysed By:

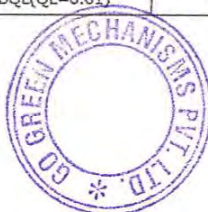
Shiyal K. B.
Shiyal Kishor

Approved By:

Pankil Patel

END

GO Green Mechnisms Pvt Ltd						
Analysis Results for the Month of October 2022						
Company Name			Mahan Energen Limited.			
Sample Type			Surface Water			
Sample Quantity			8L			
Date of Sampling			15.10.2022			
Analysis Period			18.10.2022 - 29.10.2022			
SL. No.	PARAMETER	UNIT	Location		Reference Method	Norms
			Nr. Gate No. 1	Nr. Gate No. 3		
1	pH @ 25 °C	-	7.11	7.19	IS 3025-Part 11	8.5
2	Turbidity	NTU	BQL(QL=0.1)	BQL(QL=0.1)	APHA 23rd Edition (2130 B)	-
3	Total Dissolved Solids @ 180 °C	mg/L	364	279	APHA 23rd Edition (2540 C)	1500
4	Total Hardness as CaCO ₃	mg/L	180	127	APHA 23rd Edition (2340 C)	-
5	Alkalinity as CaCO ₃	mg/L	240	212.00	APHA 23rd Edition (2320 B)	200
6	Calcium as Ca	mg/L	53.71	37.27	APHA 23rd Edition (3120 B)	75.00
7	Magnesium (Mg)	mg/L	11.18	8.26	APHA 23rd Edition (3120 B)	-
8	Sulphate	mg/L	12.54	21.02	APHA 23rd Edition (4500 SO4 E)	400.00
9	Nitrate	mg/L	0.31	0.29	IS 3025 (Part 34)	50.00
10	Iron	mg/L	0.12	0.31	APHA 23rd Edition (3120 B)	50
11	Fluoride	mg/L	BQL(QL=0.1)	BQL(QL=0.1)	APHA 23rd Edition (4500 F D)	1.5
12	Sulphide	mg/L	BQL(QL=0.2)	BQL(QL=0.2)	APHA 23rd Edition (4500 S2 F)	-
13	Zinc (Zn)	mg/L	0.071	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	15
14	Chloride	mg/L	71.98	49.98	IS 3025-Part 32	600.00
15	Residual Chlorine	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	APHA 23rd Edition (4500 Cl B)	-
16	Colour	Hazen	BQL(QL=1)	BQL(QL=1)	IS 3025 part 4	300
17	Odour	-	Agreeable	Agreeable	IS 3025 part 5	-
18	Mineral Oil	mg/L	BQL(QL=1)	BQL(QL=1)	IS 3025 part 39	-
19	Ammonia	mg/L	2.80	1.40	APHA 23rd Edition (4500 NH3 C)	-
20	Taste	-	Agreeable	Agreeable	IS 3025 Part-7	-
21	Chloramines as Cl ₂	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	IS 3025 (Pt 26)	NS
22	Cyanide	mg/L	BQL(QL=0.025)	BQL(QL=0.025)	GGMPL/SOP/W/43	0.05
23	Aluminum (Al)	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	NS
24	Arsenic (As)	mg/L	BQL(QL=0.005)	BQL(QL=0.005)	APHA 23rd Edition (3120 B)	0.2
25	Barium as Ba	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	-
26	Boron (B)	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	APHA 23rd Edition (3120 B)	2
27	Cadmium (Cd)	mg/L	BQL(QL=0.002)	BQL(QL=0.002)	APHA 23rd Edition (3120 B)	0.01
28	Copper (Cu)	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	1.5
29	Lead (Pb)	mg/L	BQL(QL=0.005)	BQL(QL=0.005)	APHA 23rd Edition (3120 B)	0.1
30	Manganese (Mn)	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	APHA 23rd Edition (3120 B)	-
31	Mercury (Hg)	mg/L	BQL(QL=0.0005)	BQL(QL=0.0005)	APHA 23rd Edition (3120 B)	-
32	Selenium (Se)	mg/L	BQL(QL=0.005)	BQL(QL=0.005)	APHA 23rd Edition (3120 B)	0.05
33	Molybdenum as Mo	mg/L	BQL(QL=0.01)	BQL(QL=0.01)	APHA 23rd Edition (3120 B)	NS
34	Total Chromium Cr	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	0.05
35	Nickel as (Ni)	mg/L	BQL(QL=0.01)	BQL(QL=0.01)	APHA 23rd Edition (3120 B)	NS



36	Silver (Ag)	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	-
37	Anionic Detergent	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	IS 13428 (Annex K) : 2018	1
38	PAH					
38.1	Naphthalene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.2	1-Methylnaphthalene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.3	2-Methylnaphthalene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.4	Acenaphthylene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.5	Acenaphthene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.6	Fluorene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.7	Phenanthrene	µg/L	BQL(QL=5)	BQL(QL=5)	APHA 6440 B	-
38.8	Anthracene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.9	Fluoranthene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.10	Pyrene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.11	Benzo(a) anthracene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.12	Chrysene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.13	Benzo (b) fluoranthene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.14	Benzo(K) fluoranthene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.15	Benzo(a)pyrene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.16	Dibenzo(a,h)anthracene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.17	Benzo (g,h,i)perylene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.18	Indenol(1,2,3-cd)pyrene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
39	Polychlorinated biphenyles					
39.1	PCB 1016	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	NS
39.2	PCB 1221	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	NS
39.3	PCB 1232	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	NS
39.4	PCB 1242	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	NS
39.5	PCB 1248	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	NS
39.6	PCB 1254	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	NS
39.7	PCB 1260	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	NS
40	Trihalomethanes					
40.1	Bromoform	mg/L	BQL(QL=0.1)	BQL(QL=0.1)	APHA 6232	NS
40.2	Dibromochloromethne	mg/L	BQL(QL=0.1)	BQL(QL=0.1)	APHA 6232	NS
40.3	Bromodichloromethane	mg/L	BQL(QL=0.06)	BQL(QL=0.06)	APHA 6232	NS
40.4	Chloroform	mg/L	BQL(QL=0.2)	BQL(QL=0.2)	APHA 6232	NS



41 Pesticides						
41.1	o,p-DDT	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	-
41.2	p,p-DDT	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	-
41.3	o,p-DDE	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	-
41.4	p,p-DDE	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	-
41.5	o,p-DDD	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	-
41.6	p,p-DDD	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	-
41.7	Isoproturon	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 532	-
41.8	Alachlor	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 525.2	-
41.9	Atrazine	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 8141A	-
41.10	Aldrin/Dieldrin	µg/L	BQL(QL=0.01)	BQL(QL=0.01)	USEPA 508	-
41.11	Gamma-HCH(Lindane)	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 508	-
41.12	Alpha HCH	µg/L	BQL(QL=0.005)	BQL(QL=0.005)	USEPA 508	-
41.13	Beta HCH	µg/L	BQL(QL=0.02)	BQL(QL=0.02)	USEPA 508	-
41.14	Delta HCH	µg/L	BQL(QL=0.02)	BQL(QL=0.02)	USEPA 508	-
41.15	Endosulfan (alpha)	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	-
41.16	Endosulfan (Beta)	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	-
41.17	Endosulfan (Sulphate)	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	-
41.18	Monocrotophos	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 8141A	-
41.19	Ethoin	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	UEPA 1657A	-
41.20	Chlorpyrifos	µg/L	BQL(QL=0.25)	BQL(QL=0.25)	USEPA 8141A	-
41.21	Phorate	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 8141A	-
41.22	Butachlor	µg/L	BQL(QL=20)	BQL(QL=20)	USEPA 8141A	-
41.23	Methyl Parathion	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 8141A	-
41.24	Malathion	µg/L	BQL(QL=0.25)	BQL(QL=0.25)	USEPA 8141A	-
42 Microbiological						
42.1	E.Coli (MPN/100 ml)	MPN/100ml	Absent	Absent	IS 1622	NS
42.2	Total Coliform	MPN/100ml	Absent	Absent	IS 1622	5000

BQL =Below Quantification Limit; NA = Not Applicable
 as per IS: 2296;Class C

Analysed By:

Shiyal Kishor
 Shiyal Kishor

Approved By:

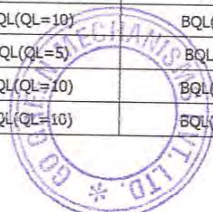
Pankil Patel
 Pankil Patel



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GO Green Mechanisms Pvt Ltd
Analysis Results for the Month of January- 2023

Company Name		Mahan Energen Limited.				
Sample Type		Surface Water				
Sample Quantity		8L				
Sample Collected By		Laboratory Representative				
Date of Sampling		16.01.2023				
Analysis Period		22.01.2023 to 28.01.2023				
SL. No.	PARAMETER	UNIT	Location		Reference Method	Norms
			Nr. Gate No. 1	Nr. Gate No. 3		
1	pH @ 25 °C	-	7.34	7.23	IS 3025-Part 11	8.5
2	Turbidity	NTU	BQL(QL=0.1)	BQL(QL=0.1)	APHA 23rd Edition (2130 B)	-
3	Total Dissolved Solids @ 180 °C	mg/L	401.0	325.0	APHA 23rd Edition (2540 C)	1500
4	Total Hardness as CaCO ₃	mg/L	196.0	140.0	APHA 23rd Edition (2340 C)	-
5	Alkalinity as CaCO ₃	mg/L	192.0	186.0	APHA 23rd Edition (2320 B)	200
6	Calcium as Ca	mg/L	59.32	38.48	APHA 23rd Edition (3120 B)	75.00
7	Magnesium (Mg)	mg/L	11.66	10.69	APHA 23rd Edition (3120 B)	-
8	Sulphate	mg/L	18.12	23.52	APHA 23rd Edition (4500 SO4 E)	400.00
9	Nitrate	mg/L	0.52	0.26	IS 3025 (Part 34)	50.00
10	Iron	mg/L	0.103	0.492	APHA 23rd Edition (3120 B)	50
11	Fluoride	mg/L	BQL(QL=0.1)	BQL(QL=0.1)	APHA 23rd Edition (4500 F D)	1.5
12	Sulphide	mg/L	BQL(QL=0.2)	BQL(QL=0.2)	APHA 23rd Edition (4500 S2 F)	-
13	Zinc (Zn)	mg/L	0.071	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	15
14	Chloride	mg/L	82.97	54.98	IS 3025-Part 32	600.00
15	Residual Chlorine	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	APHA 23rd Edition (4500 Cl B)	-
16	Colour	Hazen	BQL(QL=1)	BQL(QL=1)	IS 3025 part 4	300
17	Odour	-	Agreeable	Agreeable	IS 3025 part 5	-
18	Mineral Oil	mg/L	BQL(QL=1)	BQL(QL=1)	IS 3025 part 39	-
19	Ammonia	mg/L	1.96	0.56	APHA 23rd Edition (4500 NH3 C)	-
20	Taste	-	Agreeable	Agreeable	IS 3025 Part-7	-
21	Chloramines as Cl ₂	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	IS 3025 (Pt 26)	NS
22	Cyanide	mg/L	BQL(QL=0.025)	BQL(QL=0.025)	GGMPL/SOP/W/43	0.05
23	Aluminum (Al)	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	NS
24	Arsenic (As)	mg/L	BQL(QL=0.005)	BQL(QL=0.005)	APHA 23rd Edition (3120 B)	0.2
25	Barium as Ba	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	-
26	Boron (B)	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	APHA 23rd Edition (3120 B)	2
27	Cadmium (Cd)	mg/L	BQL(QL=0.002)	BQL(QL=0.002)	APHA 23rd Edition (3120 B)	0.01
28	Copper (Cu)	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	1.5
29	Lead (Pb)	mg/L	BQL(QL=0.005)	BQL(QL=0.005)	APHA 23rd Edition (3120 B)	0.1
30	Manganese (Mn)	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	APHA 23rd Edition (3120 B)	-
31	Mercury (Hg)	mg/L	BQL(QL=0.0005)	BQL(QL=0.0005)	APHA 23rd Edition (3120 B)	-
32	Selenium (Se)	mg/L	BQL(QL=0.005)	BQL(QL=0.005)	APHA 23rd Edition (3120 B)	0.05
33	Molybdenum as Mo	mg/L	BQL(QL=0.01)	BQL(QL=0.01)	APHA 23rd Edition (3120 B)	NS
34	Total Chromium Cr	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	0.05
35	Nickel as (Ni)	mg/L	BQL(QL=0.01)	BQL(QL=0.01)	APHA 23rd Edition (3120 B)	NS
36	Silver (Ag)	mg/L	BQL(QL=0.02)	BQL(QL=0.02)	APHA 23rd Edition (3120 B)	-
37	Anionic Detergent	mg/L	BQL(QL=0.05)	BQL(QL=0.05)	IS 13428 (Annex K) : 2018	1
38	PAH					
38.1	Naphthalene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.2	1-Methylnaphthalene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.3	2-Methylnaphthalene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.4	Acenaphthylene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.5	Acenaphthene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.6	Fluorene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.7	Phenanthrene	µg/L	BQL(QL=5)	BQL(QL=5)	APHA 6440 B	-
38.8	Anthracene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.9	Fluoranthene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-



38.10	Pyrene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.11	Benzo(a) anthracene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.12	Chrysene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.13	Benzo (b) fluoranthene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.14	Benzo(K) fluoranthene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.15	Benzo(a)pyrene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.16	Dibenzo(a,h)anthracene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.17	Benzo (g,h,i)perylene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
38.18	Indenol(1,2,3-cd)pyrene	µg/L	BQL(QL=10)	BQL(QL=10)	APHA 6440 B	-
39	Polychlorinated biphenyles					
39.1	PCB 1016	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	NS
39.2	PCB 1221	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	NS
39.3	PCB 1232	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	NS
39.4	PCB 1242	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	NS
39.5	PCB 1248	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	NS
39.6	PCB 1254	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	NS
39.7	PCB 1260	µg/L	BQL(QL=0.03)	BQL(QL=0.03)	USEPA 508	NS
40	Trihalomethanes					
40.1	Bromoform	mg/L	BQL(QL=0.1)	BQL(QL=0.1)	APHA 6232	NS
40.2	Dibromochloromethne	mg/L	BQL(QL=0.1)	BQL(QL=0.1)	APHA 6232	NS
40.3	Bromodichloromethane	mg/L	BQL(QL=0.06)	BQL(QL=0.06)	APHA 6232	NS
40.4	Chloroform	mg/L	BQL(QL=0.2)	BQL(QL=0.2)	APHA 6232	NS
41	Pesticides					
41.1	o,p-DDT	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	-
41.2	p,p-DDT	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	-
41.3	o,p-DDE	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	-
41.4	p,p-DDE	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	-
41.5	o,p-DDD	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	-
41.6	p,p-DDD	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	-
41.7	Isoproturon	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 532	-
41.8	Alachlor	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 525.2	-
41.9	Atrazine	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 8141A	-
41.10	Aldrin/Dieldrin	µg/L	BQL(QL=0.01)	BQL(QL=0.01)	USEPA 508	-
41.11	Gamma-HCH(Lindane)	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 508	-
41.12	Alpha HCH	µg/L	BQL(QL=0.005)	BQL(QL=0.005)	USEPA 508	-
41.13	Beta HCH	µg/L	BQL(QL=0.02)	BQL(QL=0.02)	USEPA 508	-
41.14	Delta HCH	µg/L	BQL(QL=0.02)	BQL(QL=0.02)	USEPA 508	-
41.15	Endosulfan (alpha)	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	-
41.16	Endosulfan (Beta)	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	-
41.17	Endosulfan (Sulphate)	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 508	-
41.18	Monocrotophos	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 8141A	-
41.19	Ethoin	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	UEPA 1657A	-
41.20	Chlorpyriphos	µg/L	BQL(QL=0.25)	BQL(QL=0.25)	USEPA 8141A	-
41.21	Phorate	µg/L	BQL(QL=0.1)	BQL(QL=0.1)	USEPA 8141A	-
41.22	Butachlor	µg/L	BQL(QL=20)	BQL(QL=20)	USEPA 8141A	-
41.23	Methyl Parathion	µg/L	BQL(QL=0.05)	BQL(QL=0.05)	USEPA 8141A	-
41.24	Malathion	µg/L	BQL(QL=0.25)	BQL(QL=0.25)	USEPA 8141A	-
42	Microbiological					
42.1	E.Coli (MPN/100 ml)	MPN/100ml	Absent	Absent	IS 1622	NS
42.2	Total Coliform	MPN/100ml	Absent	Absent	IS 1622	5000

BQL =Below Quantification Limit; NA = Not Applicable
 Norms as per IS: 2296;Class C

Analysed By:
Shiyal K. B.
 Shiyal Kishor



Approved By:

 Pankil Patel

.END.

GO Green Mechnisms Pvt Ltd

Analysis Results for the Month of October 2022

Company Name		Mahan Energen Limited.			
Sample Type		Waste Water			
Sample Quantity		2L			
Date of Sampling		15.10.2022			
Analysis Period		18.10.2022-29.10.2022			
SL. No.	PARAMETER	UNIT	Location	Reference Method	Norms
			ETP Outlet		
1	pH @ 25 °C	-	8.10	IS 3025-Part 11	6.5-9.0
2	Total Suspended Solids	mg/L	20.00	APHA 23rd Edition (2540 D)	100
3	BOD at 27°C – 3 Days	mg/L	9.60	IS 3025-Part 44	30
4	Chemical Oxygen Demand	mg/L	40.00	APHA 23rd Edition(5220 B)	250
5	Oil & Grease	mg/L	BQL(QL=2)	IS 3025-Part 39	10
6	Chloride	mg/L	110.00	IS 3025- Part 32	1000
7	Total Dissolved Solids	mg/L	586.00	APHA 23rd Edn 2540 C	2100

BQL =Below Quantification Limit; NA = Not Applicable

Norms as per CTE.

Analysed By:

Shiyal Kishor
Shiyal Kishor



Approved By:

Pankil Patel
Pankil Patel

.....END.....

GO Green Mechnisms Pvt Ltd

Analysis Results for the Month of November -2022

Company Name		Mahan Energen Limited.			
Sample Type		Waste Water			
Sample Quantity		2L			
Date of Sampling		10.11.2022			
Analysis Period		19.11.2022 to 25.11.2022			
SL. No.	PARAMETER	UNIT	Location	Reference Method	Norms
			ETP Outlet		
1	pH @ 25 °C	-	8.34	IS 3025-Part 11	6.5-9.0
2	Total Suspended Solids	mg/L	24.00	APHA 23rd Edition (2540 D)	100
3	BOD at 27°C – 3 Days	mg/L	10.43	IS 3025-Part 44	30
4	Chemical Oxygen Demand	mg/L	40.00	APHA 23rd Edition(5220 B)	250
5	Oil & Grease	mg/L	BQL(QL=2)	IS 3025-Part 39	10
6	Chloride	mg/L	113.00	IS 3025- Part 32	1000
7	Total Dissolved Solids	mg/L	567.00	APHA 23rd Edn 2540 C	2100

BQL =Below Quantification Limit; NA = Not Applicable

Norms as per CTE.

Analysed By:

Shiyal Kishor
Shiyal Kishor



Approved By:

Pankil Patel
Pankil Patel

END

GO Green Mechanisms Pvt Ltd

Analysis Results for the Month of December -2022

Company Name	Mahan Energen Limited.
Sample Type	Waste Water
Sample Quantity	2L
Sample Collected By	Laboratory Representative
Date of Sampling	15.12.2022
Analysis Period	22.12.2022 to 28.12.2022

SL. No.	PARAMETER	UNIT	Location	Reference Method	Norms
			ETP Outlet		
1	pH @ 25 °C	-	8.12	IS 3025-Part 11	6.5-9.0
2	Total Suspended Solids	mg/L	27.00	APHA 23rd Edition (2540 D)	100
3	BOD at 27°C – 3 Days	mg/L	9.78	IS 3025-Part 44	30
4	Chemical Oxygen Demand	mg/L	35.00	APHA 23rd Edition(5220 B)	250
5	Oil & Grease	mg/L	BQL(QL=2)	IS 3025-Part 39	10
6	Chloride	mg/L	98.00	IS 3025- Part 32	1000
7	Total Dissolved Solids	mg/L	603.00	APHA 23rd Edn 2540 C	2100

BQL =Below Quantification Limit; NA = Not Applicable

Norms as per CTE.

Analysed By:

Shiyal Kishor
Shiyal Kishor



Approved By:

Pankil Patel
Pankil Patel

END

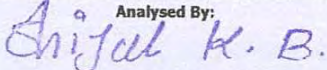
GO Green Mechanisms Pvt Ltd

Analysis Results for the Month of January -2023

Company Name		Mahan Energen Limited.			
Sample Type		Waste Water			
Sample Quantity		2L			
Sample Collected By		Laboratory Representative			
Date of Sampling		16.01.2023			
Analysis Period		22.01.2023 to 28.01.2023			
SL. No.	PARAMETER	UNIT	Location	Reference Method	Norms
			ETP Outlet		
1	pH @ 25 °C	-	7.86	IS 3025-Part 11	6.5-9.0
2	Total Suspended Solids	mg/L	33.00	APHA 23rd Edition (2540 D)	100
3	BOD at 27°C – 3 Days	mg/L	12.80	IS 3025-Part 44	30
4	Chemical Oxygen Demand	mg/L	40.00	APHA 23rd Edition(5220 B)	250
5	Oil & Grease	mg/L	BQL(QL=2)	IS 3025-Part 39	10
6	Chloride	mg/L	102.98	IS 3025- Part 32	1000
7	Total Dissolved Solids	mg/L	621.00	APHA 23rd Edn 2540 C	2100

BQL =Below Quantification Limit; NA = Not Applicable

Norms as per CTE.

Analysed By:

 Shiyal Kishor



Approved By:


 Pankil Patel

.....END.....

GO Green Mechanisms Pvt Ltd

Analysis Results for the Month of February -2023

Company Name		Mahan Energen Limited.			
Sample Type		Waste Water			
Sample Quantity		2L			
Sample Collected By		Laboratory Representative			
Date of Sampling		08.02.2023			
Analysis Period		15.02.2023 to 20.02.2023			
SL. No.	PARAMETER	UNIT	Location	Reference Method	Norms
			ETP Outlet		
1	pH @ 25 °C	-	7.59	IS 3025-Part 11	6.5-9.0
2	Total Suspended Solids	mg/L	28.00	APHA 23rd Edition (2540 D)	100
3	BOD at 27°C – 3 Days	mg/L	16.80	IS 3025-Part 44	30
4	Chemical Oxygen Demand	mg/L	60.00	APHA 23rd Edition(5220 B)	250
5	Oil & Grease	mg/L	BQL(QL=2)	IS 3025-Part 39	10
6	Chloride	mg/L	92.97	IS 3025- Part 32	1000
7	Total Dissolved Solids	mg/L	644.00	APHA 23rd Edn 2540 C	2100

BQL =Below Quantification Limit; NA = Not Applicable

Norms as per CTE.

Analysed By:

Shiyal Kishor
Shiyal Kishor

Approved By:

Pankil Patel
Pankil Patel

.....END.....



GO Green Mechanisms Pvt Ltd

Analysis Results for the Month of March -2023

Company Name		Mahan Energen Limited.			
Sample Type		Waste Water			
Sample Quantity		2 L			
Sample Collected By		Laboratory Representative			
Date of Sampling		13.03.2023			
Analysis Period		20.03.2023 to 25.03.2023			
SL. No.	PARAMETER	UNIT	Location	Reference Method	Norms
			ETP Outlet		
1	pH @ 25 °C	-	7.76	IS 3025-Part 11	6.5-9.0
2	Total Suspended Solids	mg/L	35.00	APHA 23rd Edition (2540 D)	100
3	BOD at 27°C – 3 Days	mg/L	14	IS 3025-Part 44	30
4	Chemical Oxygen Demand	mg/L	70.00	APHA 23rd Edition(5220 B)	250
5	Oil & Grease	mg/L	BQL(QL=2)	IS 3025-Part 39	10
6	Chloride	mg/L	96.97	IS 3025- Part 32	1000
7	Total Dissolved Solids	mg/L	654.00	APHA 23rd Edn 2540 C	2100

BQL =Below Quantification Limit; NA = Not Applicable

Norms as per CTE.

Analysed By:

Shiyal K.B
Shiyal Kishor

Approved By:

P
Pankil Patel

.....END.....



GO Green Mechnisms Pvt Ltd

Analysis Results for the Month of October 2022

Company Name		Mahan Energen Limited.			
Sample Type		Waste Water			
Sample Quantity		2L			
Date of Sampling		15.10.2022			
Analysis Period		18.10.2022-29.10.2022			
SL. No.	PARAMETER	UNIT	Location	Reference Method	Norms
			STP Outlet		
1	pH @ 25 °C	-	8.61	IS 3025-Part 11	6.5-9.0
2	Total Suspended Solids	mg/L	16.00	APHA 23rd Edition (2540 D)	100
3	BOD at 27°C – 3 Days	mg/L	14.20	IS 3025-Part 44	30
4	Chemical Oxygen Demand	mg/L	60.00	APHA 23rd Edition(5220 B)	250
5	Oil & Grease	mg/L	BQL(QL=2)	IS 3025-Part 39	10
6	Faecal Coliform	MPN/100ML	Absent	IS 1622	<1000

BQL =Below Quantification Limit; NA = Not Applicable

Norms as per CTE.

Analysed By:

Shikhar K.B. Shikhar Kishor

Approved By:

Pankaj Patel



.....END.....

GO Green Mechnisms Pvt Ltd

Analysis Results for the Month of November 2022

Company Name		Mahan Energen Limited.			
Sample Type		Waste Water			
Sample Quantity		2L			
Date of Sampling		10.11.2022			
Analysis Period		19.11.2022 to 25.11.2022			
SL. No.	PARAMETER	UNIT	Location	Reference Method	Norms
			STP Outlet		
1	pH @ 25 °C	-	8.46	IS 3025-Part 11	6.5-9.0
2	Total Suspended Solids	mg/L	14.00	APHA 23rd Edition (2540 D)	100
3	BOD at 27°C – 3 Days	mg/L	13.71	IS 3025-Part 44	30
4	Chemical Oxygen Demand	mg/L	50.00	APHA 23rd Edition(5220 B)	250
5	Oil & Grease	mg/L	BQL(QL=2)	IS 3025-Part 39	10
6	Faecal Coliform	MPN/100ML	Absent	IS 1622	<1000

BQL =Below Quantification Limit; NA = Not Applicable

Norms as per CTE.

Analysed By:

Shiyal Kishor
Shiyal Kishor



Approved By:

Pankil Patel
Pankil Patel

.....

GO Green Mechanisms Pvt Ltd

Analysis Results for the Month of December -2022

Company Name		Mahan Energen Limited.			
Sample Type		Waste Water			
Sample Collected By		Laboratory Representative			
Sample Quantity		2L			
Date of Sampling		15.12.2022			
Analysis Period		22.12.2022 to 28.12.2022			
SL. No.	PARAMETER	UNIT	Location	Reference Method	Norms
			STP Outlet		
1	pH @ 25 °C	-	7.90	IS 3025-Part 11	6.5-9.0
2	Total Suspended Solids	mg/L	17.00	APHA 23rd Edition (2540 D)	100
3	BOD at 27°C – 3 Days	mg/L	11.20	IS 3025-Part 44	30
4	Chemical Oxygen Demand	mg/L	45.00	APHA 23rd Edition(5220 B)	250
5	Oil & Grease	mg/L	BQL(QL=2)	IS 3025-Part 39	10
6	Faecal Coliform	MPN/100ML	Absent	IS 1622	<1000

BQL =Below Quantification Limit; NA = Not Applicable

Norms as per CTE.

Analysed By:

Shiyal Kishor
Shiyal Kishor



Approved By:

Pankil Patel
Pankil Patel

.....END.....

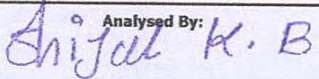
GO Green Mechanisms Pvt Ltd

Analysis Results for the Month of January -2023

Company Name		Mahan Energen Limited.			
Sample Type		Waste Water			
Sample Collected By		Laboratory Representative			
Sample Quantity		2L			
Date of Sampling		16.01.2023			
Analysis Period		22.01.2023 to 28.01.2023			
SL. No.	PARAMETER	UNIT	Location	Reference Method	Norms
			STP Outlet		
1	pH @ 25 °C	-	8.06	IS 3025-Part 11	6.5-9.0
2	Total Suspended Solids	mg/L	23.00	APHA 23rd Edition (2540 D)	100
3	BOD at 27°C – 3 Days	mg/L	13.60	IS 3025-Part 44	30
4	Chemical Oxygen Demand	mg/L	50.00	APHA 23rd Edition(5220 B)	250
5	Oil & Grease	mg/L	BQL(QL=2)	IS 3025-Part 39	10
6	Faecal Coliform	MPN/100ML	Absent	IS 1622	<1000

BQL =Below Quantification Limit; NA = Not Applicable

Norms as per CTE.

Analysed By:

Shiyal Kishor



Approved By:

Pankil Patel

.....END.....

GO Green Mechanisms Pvt Ltd

Analysis Results for the Month of february -2023

Company Name		Mahan Energen Limited.			
Sample Type		Waste Water			
Sample Collected By		Laboratory Representative			
Sample Quantity		2L			
Date of Sampling		08.02.2023			
Analysis Period		15.02.2023 to 20.02.2023			
SL. No.	PARAMETER	UNIT	Location	Reference Method	Norms
			STP Outlet		
1	pH @ 25 °C	-	7.66	IS 3025-Part 11	6.5-9.0
2	Total Suspended Solids	mg/L	19.00	APHA 23rd Edition (2540 D)	100
3	BOD at 27°C – 3 Days	mg/L	11.20	IS 3025-Part 44	30
4	Chemical Oxygen Demand	mg/L	40.00	APHA 23rd Edition(5220 B)	250
5	Oil & Grease	mg/L	BQL(QL=2)	IS 3025-Part 39	10
6	Faecal Coliform	MPN/100ML	Absent	IS 1622	<1000

BQL =Below Quantification Limit; NA = Not Applicable

Norms as per CTE.

Analysed By:

Shiyal K.B.
Shiyal Kishor

Approved By:

P
Pankil Patel

.....END.....



GO Green Mechanisms Pvt Ltd

Analysis Results for the Month of March -2023

Company Name		Mahan Energen Limited.			
Sample Type		Waste Water			
Sample Collected By		Laboratory Representative			
Sample Quantity		2L			
Date of Sampling		13-03-2023			
Analysis Period		20-03-2023 To 25-03-2023			
SL. No.	PARAMETER	UNIT	Location	Reference Method	Norms
			STP Outlet		
1	pH @ 25 °C	-	7.83	IS 3025-Part 11	6.5-9.0
2	Total Suspended Solids	mg/L	23.00	APHA 23rd Edition (2540 D)	100
3	BOD at 27°C – 3 Days	mg/L	12.00	IS 3025-Part 44	30
4	Chemical Oxygen Demand	mg/L	55.00	APHA 23rd Edition(5220 B)	250
5	Oil & Grease	mg/L	BQL(QL=2)	IS 3025-Part 39	10
6	Faecal Coliform	MPN/100ML	Absent	IS 1622	<1000

BQL =Below Quantification Limit; NA = Not Applicable

Norms as per CTE.

Analysed By:

Shiyal K.B.
Shiyal Kishor

Approved By:

P
Pankil Patel

.....END.....



GO Green Mechnisms Pvt Ltd

Analysis Results For The Month of October 2022

On Site 24 Hourly Monitoring Results

Company Name Mahan Energen Limited.

Sample Type Ambient Noise Monitoring

Sr No	Sampling Date	Location		Day Time in dB (A) leq (6:00 Am to 10:00 Pm)	Norms (Day Time)	Night Time in dB (A) leq (10:00 Pm to 06:00 Am)	Norms (Night Time)
1	19.10.2022	Nr. Gate No. 2	Leq :	67.8	75.0	58.9	70.0
			Max :	71.2		64.3	
			Min :	55.1		51.2	
2	15.10.2022	Nr. Admin Building	Leq :	63.2	75.0	52.3	70.0
			Max :	69.7		61.2	
			Min :	49.2		46.5	
3	15.10.2022	Nr. Gate No. 1	Leq :	71.4	75.0	65.0	70.0
			Max :	73.4		66.0	
			Min :	65.8		52.3	
4	19.10.2022	Nr. Gate No. 3	Leq :	65.3	75.0	56.4	70.0
			Max :	70.1		56.2	
			Min :	51.3		44.7	

NORMS AS PER NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000 (Industrial Area)

<p>Analysed By  Shiyal Kishor</p>		<p>Approved By  Pankil Patel</p>
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.....END.....

GO Green Mechnisms Pvt Ltd
Ambient Noise Monitoring For The Month of November -2022
On Site 24 Hourly Monitoring Results

Company Name Mahan Energen Limited.
Sample Type Ambient Noise Monitoring

Sr No	Sampling Date	Location		Day Time in dB (A) leq (6:00 Am to 10:00 Pm)	Norms (Day Time)	Night Time in dB (A) leq (10:00 Pm to 06:00 Am)	Norms (Night Time)
1	15.11.2022	Nr. Gate No. 2	Leq :	63.1	75.0	49.1	70.0
			Max :	68.4		53.1	
			Min :	49.9		45.8	
2	15.11.2022	Nr. Admin Building	Leq :	58.4	75.0	46.2	70.0
			Max :	62.5		52.1	
			Min :	44.1		39.7	
3	14.11.2022	Nr. Gate No. 1	Leq :	65.8	75.0	52.9	70.0
			Max :	70.3		56.1	
			Min :	53.4		49.7	
4	16.11.2022	Nr. Gate No. 3	Leq :	53.3	75.0	42.8	70.0
			Max :	57.8		45.6	
			Min :	44.1		35.7	

NORMS AS PER NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000 (Industrial Area)

Analysed By *Shiyal K.B.*
Shiyal Kishor



Approved By *Pankil Patel*
Pankil Patel

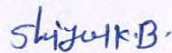

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GO Green Mechanisms Pvt Ltd

Ambient Noise Monitoring For The Month of December -2022

On Site 24 Hourly Monitoring Results

Company Name		Mahan Energen Limited.					
Sample Collected By		Laboratory Representative					
Sample Type		Ambient Noise Monitoring					
Sr. No.		Location		Day Time in dB (A) leq (6:00 Am to 10:00 Pm)	Norms (Day Time)	Night Time in dB (A) leq (10:00 Pmto 06:00 Am)	Norms (Night Time)
1	08.12.2022	Nr. Gate No. 2	Leq :	62.0	75.0	59.4	70.0
			Max :	67.3		62.8	
			Min :	51.8		45.2	
2	05.12.2022	Nr. Admin Building	Leq :	51.5	75.0	48.4	70.0
			Max :	59.5		53.7	
			Min :	44.9		39.8	
3	05.12.2022	Nr. Gate No. 1	Leq :	60.4	75.0	58.0	70.0
			Max :	68.4		61.5	
			Min :	53.9		45.1	
4	08.12.2022	Nr. Gate No. 3	Leq :	45.2	75.0	40.8	70.0
			Max :	58.5		51.2	
			Min :	41.5		37.4	

NORMS AS PER NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000 (Industrial Area)	
Analysed By  Shiyal Kishor	Approved By  Pankil Patel



.....END.....

GO Green Mechanisms Pvt Ltd

Ambient Noise Monitoring For The Month of January -2023

On Site 24 Hourly Monitoring Results

Company Name		Mahan Energen Limited.					
Sample Collected By		Laboratory Representative					
Sample Type		Ambient Noise Monitoring					
Sr. No.		Location		Day Time in dB (A) leq (6:00 Am to 10:00 Pm)	Norms (Day Time)	Night Time in dB (A) leq (10:00 Pmto 06:00 Am)	Norms (Night Time)
1	09.01.2023	Nr. Gate No. 1	Leq :	62.4	75.0	54.8	70.0
			Max :	68.0		58.6	
			Min :	57.5		49.1	
2	09.01.2023	Nr. Admin Building	Leq :	54.0	75.0	50.4	70.0
			Max :	59.6		54.6	
			Min :	48.6		49.7	
3	12.01.2023	Nr. Gate No. 2	Leq :	60.2	75.0	56.5	70.0
			Max :	65.2		60.1	
			Min :	54.3		47.4	
4	12.01.2023	Nr. Gate No. 3	Leq :	47.2	75.0	42.1	70.0
			Max :	56.2		46.2	
			Min :	40.3		36.1	

NORMS AS PER NOISE POLLUTION (REGULATION AND CONTROL) RULES/2000 (Industrial Area)

Analyesd By

Anil K. B.
Shiyal Kishor



Approved By

P

Pankil Patel

.....**END**.....

GO Green Mechanisms Pvt Ltd

Ambient Noise Monitoring For The Month of February -2023

On Site 24 Hourly Monitoring Results

Company Name		Mahan Energen Limited.					
Sample Collected By		Laboratory Representative					
Sample Type		Ambient Noise Monitoring					
Sr. No.		Location		Day Time in dB (A) leq (6:00 Am to 10:00 Pm)	Norms (Day Time)	Night Time in dB (A) leq (10:00 Pm to 06:00 Am)	Norms (Night Time)
1	23.02.2023	Nr. Admin Building	Leq :	54.9	75.0	48.7	70.0
			Max :	58.9		50.9	
			Min :	47.3		46.5	
2	24.02.2023	Nr. Gate No. 2	Leq :	59.0	75.0	55.3	70.0
			Max :	62		59.2	
			Min :	53.1		49.2	
3	25.02.2023	Nr. Gate No. 1	Leq :	61.1	75.0	52.8	70.0
			Max :	71.2		53.8	
			Min :	54.6		51.7	
4	27.02.2023	Nr. Gate No. 3	Leq :	47.6	75.0	42.2	70.0
			Max :	52.4		43.9	
			Min :	46.2		39.6	

NORMS AS PER NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000 (Industrial Area)

Analysed By

Shiyal Kishor
Shiyal Kishor

Approved By

Pankil Patel
Pankil Patel

.....END.....



GO Green Mechnisms Pvt Ltd

Analysis Results For The Month of October 2022

On Site 24 Hourly Monitoring Results

Company Name Mahan Energen Limited.

Sample Type Ambient Noise Monitoring

Sr No	Sampling Date	Location		Day Time in dB (A) leq (6:00 Am to 10:00 Pm)	Norms (Day Time)	Night Time in dB (A) leq (10:00 Pm to 06:00 Am)	Norms (Night Time)
1	19.10.2022	Nr. Gate No. 2	Leq :	67.8	75.0	58.9	70.0
			Max :	71.2		64.3	
			Min :	55.1		51.2	
2	15.10.2022	Nr. Admin Building	Leq :	63.2	75.0	52.3	70.0
			Max :	69.7		61.2	
			Min :	49.2		46.5	
3	15.10.2022	Nr. Gate No. 1	Leq :	71.4	75.0	65.0	70.0
			Max :	73.4		66.0	
			Min :	65.8		52.3	
4	19.10.2022	Nr. Gate No. 3	Leq :	65.3	75.0	56.4	70.0
			Max :	70.1		56.2	
			Min :	51.3		44.7	

NORMS AS PER NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000 (Industrial Area)

<p>Analysed By  Shiyal Kishor</p>		<p>Approved By  Pankil Patel</p>
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.....END.....

GO Green Mechnisms Pvt Ltd
Ambient Noise Monitoring For The Month of November -2022
On Site 24 Hourly Monitoring Results

Company Name Mahan Energen Limited.
Sample Type Ambient Noise Monitoring

Sr No	Sampling Date	Location		Day Time in dB (A) leq (6:00 Am to 10:00 Pm)	Norms (Day Time)	Night Time in dB (A) leq (10:00 Pm to 06:00 Am)	Norms (Night Time)
1	15.11.2022	Nr. Gate No. 2	Leq :	63.1	75.0	49.1	70.0
			Max :	68.4		53.1	
			Min :	49.9		45.8	
2	15.11.2022	Nr. Admin Building	Leq :	58.4	75.0	46.2	70.0
			Max :	62.5		52.1	
			Min :	44.1		39.7	
3	14.11.2022	Nr. Gate No. 1	Leq :	65.8	75.0	52.9	70.0
			Max :	70.3		56.1	
			Min :	53.4		49.7	
4	16.11.2022	Nr. Gate No. 3	Leq :	53.3	75.0	42.8	70.0
			Max :	57.8		45.6	
			Min :	44.1		35.7	

NORMS AS PER NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000 (Industrial Area)

Analysed By *Shiyal K.B.*
Shiyal Kishor



Approved By *Pankil Patel*
Pankil Patel

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GO Green Mechanisms Pvt Ltd

Ambient Noise Monitoring For The Month of December -2022

On Site 24 Hourly Monitoring Results

Company Name		Mahan Energen Limited.					
Sample Collected By		Laboratory Representative					
Sample Type		Ambient Noise Monitoring					
Sr. No.		Location		Day Time in dB (A) leq (6:00 Am to 10:00 Pm)	Norms (Day Time)	Night Time in dB (A) leq (10:00 Pmto 06:00 Am)	Norms (Night Time)
1	08.12.2022	Nr. Gate No. 2	Leq :	62.0	75.0	59.4	70.0
			Max :	67.3		62.8	
			Min :	51.8		45.2	
2	05.12.2022	Nr. Admin Building	Leq :	51.5	75.0	48.4	70.0
			Max :	59.5		53.7	
			Min :	44.9		39.8	
3	05.12.2022	Nr. Gate No. 1	Leq :	60.4	75.0	58.0	70.0
			Max :	68.4		61.5	
			Min :	53.9		45.1	
4	08.12.2022	Nr. Gate No. 3	Leq :	45.2	75.0	40.8	70.0
			Max :	58.5		51.2	
			Min :	41.5		37.4	

NORMS AS PER NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000 (Industrial Area)

Analysed By

Shiyal Kishor
Shiyal Kishor



Approved By

Pankil Patel
Pankil Patel

.....END.....

GO Green Mechanisms Pvt Ltd

Ambient Noise Monitoring For The Month of January -2023

On Site 24 Hourly Monitoring Results

Company Name		Mahan Energen Limited.					
Sample Collected By		Laboratory Representative					
Sample Type		Ambient Noise Monitoring					
Sr. No.		Location		Day Time in dB (A) leq (6:00 Am to 10:00 Pm)	Norms (Day Time)	Night Time in dB (A) leq (10:00 Pm to 06:00 Am)	Norms (Night Time)
1	09.01.2023	Nr. Gate No. 1	Leq :	62.4	75.0	54.8	70.0
			Max :	68.0		58.6	
			Min :	57.5		49.1	
2	09.01.2023	Nr. Admin Building	Leq :	54.0	75.0	50.4	70.0
			Max :	59.6		54.6	
			Min :	48.6		49.7	
3	12.01.2023	Nr. Gate No. 2	Leq :	60.2	75.0	56.5	70.0
			Max :	65.2		60.1	
			Min :	54.3		47.4	
4	12.01.2023	Nr. Gate No. 3	Leq :	47.2	75.0	42.1	70.0
			Max :	56.2		46.2	
			Min :	40.3		36.1	

NORMS AS PER NOISE POLLUTION (REGULATION AND CONTROL) RULES/2000 (Industrial Area)

<p>Analyesd By  Shiyal Kishor</p>		<p>Approved By  Pankil Patel</p>
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.....**END**.....

GO Green Mechanisms Pvt Ltd

Ambient Noise Monitoring For The Month of February -2023

On Site 24 Hourly Monitoring Results

Company Name		Mahan Energen Limited.					
Sample Collected By		Laboratory Representative					
Sample Type		Ambient Noise Monitoring					
Sr. No.		Location		Day Time in dB (A) leq (6:00 Am to 10:00 Pm)	Norms (Day Time)	Night Time in dB (A) leq (10:00 Pm to 06:00 Am)	Norms (Night Time)
1	23.02.2023	Nr. Admin Building	Leq :	54.9	75.0	48.7	70.0
			Max :	58.9		50.9	
			Min :	47.3		46.5	
2	24.02.2023	Nr. Gate No. 2	Leq :	59.0	75.0	55.3	70.0
			Max :	62		59.2	
			Min :	53.1		49.2	
3	25.02.2023	Nr. Gate No. 1	Leq :	61.1	75.0	52.8	70.0
			Max :	71.2		53.8	
			Min :	54.6		51.7	
4	27.02.2023	Nr. Gate No. 3	Leq :	47.6	75.0	42.2	70.0
			Max :	52.4		43.9	
			Min :	46.2		39.6	

NORMS AS PER NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000 (Industrial Area)

Analysed By

Shiyal Kishor
Shiyal Kishor

Approved By

Pankil Patel
Pankil Patel

.....END.....



GO Green Mechanisms Pvt Ltd

Ambient Noise Monitoring For The Month of March -2023

On Site 24 Hourly Monitoring Results

Company Name		Mahan Energen Limited.					
Sample Collected By		Laboratory Representative					
Sample Type		Ambient Noise Monitoring					
Sr. No.		Location		Day Time in dB (A) leq (6:00 Am to 10:00 Pm)	Norms (Day Time)	Night Time in dB (A) leq (10:00 Pmto 06:00 Am)	Norms (Night Time)
1	06.03.2023	Nr. Admin Building	Leq :	67.3	75.0	54.4	70.0
			Max :	69.5		57.6	
			Min :	63.9		48.2	
2	06.03.2023	Nr. Gate No. 1	Leq :	61.9	75.0	54.1	70.0
			Max :	70.2		62.8	
			Min :	58.2		50.7	
3	09.03.2023	Nr. Gate No. 2	Leq :	69.2	75.0	65.4	70.0
			Max :	71.6		67.3	
			Min :	65.6		63.7	
4	10.03.2023	Nr. Gate No. 3	Leq :	56.2	75.0	48.8	70.0
			Max :	58.4		52.1	
			Min :	53.1		44.6	

NORMS AS PER NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000 (Industrial Area)

Analysed By

Shiyal Kishor
Shiyal Kishor

Approved By

Pankil Patel
Pankil Patel

.....END.....



Mahan Energen Limited

Annexure-II

Greenbelt Details:

Year	Total Plantation	Area Covered in Ha	Plantation Survival Rate
FY- 2022-2023	5161	7.0	More than 90 %
Total Plantation	108446	116.0	

PLANTED SPECIES IN AND AROUND PLANT PREMISES

Sr. No.	Scientific Name	Common Name
Trees		
1.	<i>Peltophorum pterocarpum</i>	Yellow Gulmohar
2.	<i>Azadirachta indica</i>	Neem
3.	<i>Madhuca longifolia</i>	Mahua
4.	<i>Vachellia nilotica</i>	Babool
5.	<i>Tectona grandis</i>	Saghwan
6.	<i>Ficus benjamina</i>	Ficus
7.	<i>Millettia pinnata</i>	Karanj
8.	<i>Albizia saman</i>	Rain Tree
9.	<i>Delonix regia</i>	Gulmohar
10.	<i>Senna siamea</i>	Kasod
11.	<i>Syzygium cumini</i>	Jamun
12.	<i>Mangifera indica</i>	Mango
13.	<i>Psidium guajava</i>	Guava
14.	<i>Manilkara zapota</i>	Chiku
15.	<i>Phyllanthus emblica</i>	Amla
16.	<i>Artocarpus heterophyllus</i>	Jack Fruit
17.	<i>Gmelina arborea</i>	Gumhar
18.	<i>Saraca asoca</i>	Ashoka
19.	<i>Cassia fistula</i>	Amaltaas
20.	<i>Mimusops elengi</i>	Molshree
21.	<i>Terminalia arjuna</i>	Arjun
22.	<i>Dalbergia sissoo</i>	Sisham
23.	<i>Bombax ceiba</i>	Simal
24.	<i>Juniperus</i>	Hapusa
25.	<i>Thuja</i>	Thuja
26.	<i>Moringa oleifera</i>	Drumstick
27.	<i>Brahea</i>	Palm
28.	<i>Lagerstroemia speciosa</i>	Zarul
29.	<i>Aegle marmelos</i>	Bel
Shrubs		
30.	<i>Callistemon</i>	Bottle Brush
31.	<i>Codiaeum variegatum</i>	Croton
32.	<i>Rosa</i>	Rose
33.	<i>Bougainvillea</i>	Bougainvillea
34.	<i>Hibiscus</i>	China rose
35.	<i>Mussaenda erythrophylla</i>	Mussaenda
36.	<i>Plumeria Spp</i>	White Frangipani
37.	<i>ixora coccinea</i>	ixora
38.	<i>Tabernaemontana divaricata</i>	Pinwheel flower
39.	<i>Cycas revoluta</i>	Cycas
40.	<i>Lantana camara</i>	Lantana
41.	<i>Berberis thunbergii</i>	Hedge

ASH PERCENTAGE IN COAL**(October'2022 to March'2023)**

Month	Coal Consumption (MT)	Ash Content in Coal (%)
October'2022	103595	27.44
November'2022	123894	26.67
December'2022	194660	29.38
January'2023	149287	29.54
February'2023	326560	29.98
March'2023	330943	33.97
Average	29.49

MT-Metric Tone

- Mahan Energen Limited is based on **Pit head** Thermal Power Plant

<u>Ash Generation and Utilization Details (October'2022-March'2023)</u>								
Month	Total Ash Generation (MT)	For Cement Industry (MT)	For Brick Plant (MT)	Inside the plant premises/ boundary for area development/ Construction purpose (MT)	Pond Ash utilized Inside the plant premises/ boundary for area development (MT)	Pond Ash utilized for inside Ramp & approach road of dyke formation (MT)	Total ash Utilized (MT)	Ash Utilized %
October'22	28427	21074	0	5685	0	0	26759	94.13%
November'22	33046	15541	0	17505	0	0	33046	100.0%
December'22	57192	50629	0	11438	0	4869	66937	117.0%
January'23	44110	32486	0	11625	0	44452	88563	200.8%
February'23	97917	69460	0	28455	72343	30000	200259	204.55%
March'23	112432	72977	0	39453	172598	14973	300001	266.83%
Total	373124	262168	0	114163	244941	94294	715565	191.78%



2022-23

Annual Progress Report - Singrauli



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Preface

Adani Foundation's Singrauli chapter started its CSR activities for Adani Power in 2022 in 10 villages – 4 core and 6 peripheral villages. AF's journey at Singrauli can be divided into two parts: Phase I establishing AF in the area through entry point activities and Phase II – implementation of project-base interventions with community contribution.

In initial phase, **Community need based structures** were constructed of core village Nagwa – approach road repair, community hall, Anganbadi, pond deepening, Drainage cleaning (10 kms), renovation of shiv temple, overhead tanks, Ashes Dam boundary wall, classrooms, smart classrooms, drinking water facilities of schools and materials support to schools – books, bags with kits on Praveshotsav.

In FY 2022 – 23 **Under Educasstion** sector in association with Vidhya Bharathi, Jabalpur (M.P) was launched in school with focus on remedial education to primary students lagging in reading, writing & numeracy.

To cater health needs of the **Community Health Care Unit** started with partner Mishra Poly clinic, Waidhan, Singrauli (M.P) (2022 – 2023) to provide immediate basic health care, counseling to the patients, with referral facilities at beneficiaries' doorsteps.

Women Entrepreneurship chapter started in Dec. 2022 with formation of **USHA KIRAN WOMEN ENTERPRISES FEDRATION** under Sustainable Livelihood Development. Under this federation 03 SHGs are running entrepreneur activity like domestic cleaning material packaging unit at Karsualal, Dhoop-Batti making group at Khairahi and Organic product like Vermi-compost, compost manure, Natural pesticide & bio-meal for plant preparing work is doing at Suhira village. Due to this total employment created for 18 families. Adani Annapurna Project initiated in 2022 – 23 supporting farmers of 6 peripheral villages to keep alive their traditional occupation through organic agricultural practices with a focus on natural farming.

Under Community Engagement, total 19 sports events have been organized by AF in the last 6 months. In which cricket tournament -02 (Nagwa & Raila), Football game – 07 (Khairahi, Bandhaura, Hardi, Raila, Nagwa) Volleyball – 02 (Karsualal, Nagwa) Kabaddi -01 has been organized. AF provided football sports kit to 32 player of MP state Santosh trophy player. Under Cultural activities Women's Day Celebrated at Nagwa, celebrate Madhya Pradesh Foundation Day on 1st Nov. at Nagwa, Bandhaura, Jute bag distribution against polythene ban at Nagwa village etc. Contribution/support in District Administration's campaigns programs shows our commitment as a responsible organization like wash day, TB day, Cancer Day. In this total 22 program 2819 people got benefited. FY 2022 – 23 CSR's journey of reaching unreached touched 02 tribal villages (Nagwa & Khairahi) of Singrauli district.

Message from Business Head

Message from Business Head It gives us great pleasure to present the Annual Report of Adani Foundation – Singrauli for FY 2022-23. As a responsible corporate citizen, we always believe in creating long term values for our stakeholders with the motto of “Growth with Goodness”. We are committed to building a sustainable future by driving positive changes in the areas of Education, Healthcare, Sustainable livelihood Development and Community Infrastructure Development. Over the past year, we have continued to focus on our core values of integrity, teamwork, excellence, and customer focus. Our efforts have resulted in significant progress in achieving our strategic goals and a positive on the communities we serve. We are proud to report that our initiatives have touched the lives of thousands of people directly or indirectly across the intervention area. Our education programs have provided quality education to underprivileged children, our Healthcare interventions have brought medical facility close to the communities, and our Sustainable Livelihood Programs have empowered many people with skills and resource to become self-reliant. We have launched a unique program “Science Exhibition” for the children in our intervention villages, which aims to introduce the learning education system. This program will enable the underprivileged students with 21st century skills and give them access to digital learning. Our efforts will give them access to health, sustainable livelihoods, access to quality education which will eventually upgrade their standard of living. We would like to take this opportunity to thank our employees, partners and stakeholders for their unwavering support and commitment towards our shared vision of a better tomorrow. We remain steadfast in our commitments to creating positive impact and contributing to the sustainable development of the communities we serve. We hope you find this report informative and insightful, and we look forward to your continued support as we embark on another year of Growth with Goodness.



Mr. Pravat Sundaray, Station Head – Operations, Mahan Energen Limited, Adani Power, Bandhaura, Singrauli (M.P)

Demographic Profile

Business Unit	Adani Foundation																																																																																																																																																											
 <p>The Mahan Energen Limited is a 2 X 600 MW Sub-critical domestic coal-fired power plant, situated in the village of Bandhaura, Singrauli District Eastern part of Madhya Pradesh.</p> <p>The 1st Unit of 600 MW at MEL was successfully commissioned, and commercial production commenced in April, 2013. The 2nd Unit of 600 MW was successfully commissioned, and commercial production was commenced in October 2018.</p> <p>Mahan Energen Limited supplies its 95% of the power in open access and rest 5% to the state of Madhya Pradesh.</p> <p>The Power generated is evacuated by double circuit 400 kV Mahan-Sipat Transmission lines cover the distance of 336 KM, which has the capacity to transmit 2000 MW.</p> <p>The requirement of coal for these units is met through domestic coal from various sources viz., NCL, CCL & APMDC.</p> <p>A railway siding 16 km away from the plant facilitates seamless supply of coal and other raw material. Nearest Railway Siding: Gajra behra; 16 KM from plant.</p>	<p>Adani Foundation's outreach in 1 blocks name Waidhan. Total 10 villages of 8 Gram Panchayats; 6224 households; Population; 27503-</p> <table border="1"> <thead> <tr> <th>SL.No.</th> <th>Gram Panchayat</th> <th>Village</th> <th>Families</th> <th>Population</th> </tr> </thead> <tbody> <tr><td>1</td><td>Amiliya</td><td>अमिलिया</td><td>784</td><td>3546</td></tr> <tr><td>2</td><td>Bandhora</td><td>सेमुआ</td><td>106</td><td>464</td></tr> <tr><td>3</td><td>Bandhora</td><td>वंधीरा</td><td>403</td><td>1727</td></tr> <tr><td>4</td><td>Karsualal</td><td>करसुआलाल</td><td>644</td><td>2628</td></tr> <tr><td>5</td><td>Karsuaraja</td><td>करसुआराजा</td><td>783</td><td>3220</td></tr> <tr><td>6</td><td>Khairahi</td><td></td><td>462</td><td>1979</td></tr> <tr><td>7</td><td>Raila</td><td>रेला</td><td>547</td><td>2883</td></tr> <tr><td>8</td><td>Nagama</td><td>चुरवाही</td><td>160</td><td>668</td></tr> <tr><td>9</td><td>Nagama</td><td>नगवा</td><td>1340</td><td>5442</td></tr> <tr><td>10</td><td>Suhira</td><td>सुहिरा</td><td>1015</td><td>4946</td></tr> <tr> <td></td> <td></td> <td></td> <td>6244</td> <td>27503</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="8">Block information</th> </tr> <tr> <th rowspan="2">Block Name</th> <th rowspan="2">No. of Town</th> <th rowspan="2">No. of Panchayat</th> <th rowspan="2">No. of Villages</th> <th rowspan="2">No. of village having transport facility</th> <th colspan="3">Size of villages</th> </tr> <tr> <th>0-499</th> <th>500-999</th> <th>1000+</th> </tr> </thead> <tbody> <tr> <td>Waidhan</td> <td>1</td> <td>104</td> <td>265</td> <td>237</td> <td>56</td> <td>86</td> <td>137</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="4">Population Detail of Waidhan Block -</th> </tr> <tr> <th>Block</th> <th>Total Population</th> <th>Male Population</th> <th>Female Population</th> </tr> </thead> <tbody> <tr> <td>Waidhan</td> <td>417721</td> <td>219194</td> <td>198527</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="7">Socio-Demographic Details of block</th> </tr> <tr> <th rowspan="2">Block</th> <th colspan="2">Population</th> <th colspan="2">Sex Ratio</th> <th colspan="2">Families</th> </tr> <tr> <th>Male</th> <th>Female</th> <th>Overall</th> <th>0-6 age group</th> <th>BPL</th> <th>APL</th> </tr> </thead> <tbody> <tr> <td>Waidhan</td> <td>219194</td> <td>198527</td> <td>906</td> <td>949</td> <td>26768</td> <td>21891</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="8">Socio-Demographic Details of block</th> </tr> <tr> <th rowspan="2">Block</th> <th colspan="2">Literacy Rate %</th> <th colspan="3">Caste wise population %</th> <th rowspan="2">Birth Rate</th> <th rowspan="2">Death Rate</th> </tr> <tr> <th>Male</th> <th>Female</th> <th>ST %</th> <th>SC%</th> <th>Other %</th> </tr> </thead> <tbody> <tr> <td>Waidhan</td> <td>72%</td> <td>38.2%</td> <td>19%</td> <td>14%</td> <td>59.99%</td> <td>35%</td> <td>11%</td> </tr> </tbody> </table> <p>Core villages of the project area are rural area, so all core villages are surrounded by high rocks of stone, forest and local rivers & water streams. Major source of livelihood: is agriculture, NTFP collection, very small shops & business, of allied product of agriculture and animal husbandry (peripheral villages) Caste: Jaiswal, Shah, Saket, Sharma (OBC), SC & ST have a total population of nearly 25 thousands with 52% of male and 48% female population. Agriculture is the main source of livelihood in this area. Nearly 40% of the population comes from the Schedule caste in Gond and Saket on blocks. Young generation engaged in labor work in nearby industrial areas.</p>	SL.No.	Gram Panchayat	Village	Families	Population	1	Amiliya	अमिलिया	784	3546	2	Bandhora	सेमुआ	106	464	3	Bandhora	वंधीरा	403	1727	4	Karsualal	करसुआलाल	644	2628	5	Karsuaraja	करसुआराजा	783	3220	6	Khairahi		462	1979	7	Raila	रेला	547	2883	8	Nagama	चुरवाही	160	668	9	Nagama	नगवा	1340	5442	10	Suhira	सुहिरा	1015	4946				6244	27503	Block information								Block Name	No. of Town	No. of Panchayat	No. of Villages	No. of village having transport facility	Size of villages			0-499	500-999	1000+	Waidhan	1	104	265	237	56	86	137	Population Detail of Waidhan Block -				Block	Total Population	Male Population	Female Population	Waidhan	417721	219194	198527	Socio-Demographic Details of block							Block	Population		Sex Ratio		Families		Male	Female	Overall	0-6 age group	BPL	APL	Waidhan	219194	198527	906	949	26768	21891	Socio-Demographic Details of block								Block	Literacy Rate %		Caste wise population %			Birth Rate	Death Rate	Male	Female	ST %	SC%	Other %	Waidhan	72%	38.2%	19%	14%	59.99%	35%	11%
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Executive Summary

Adani Foundation's Singrauli started from June 2022 for CSR activity of Mahan Energy limited in 4 core villages which are Nagwa, Kharahi, Karsualal, Bandhura and there are 6 other villages are situated near plant Suhira, Semua, Raila, Karsuraja, Betariya, Amilia. Adani Foundation is working on the below listed sectors

- Sustainable Livelihood Development
- Education
- Health
- Capacity building, Training & Awareness program
- Support to sports & cultural activity
- Community Structure Development

Key Highlights

Sustainable Livelihood Development

➤ Promotion of organic vegetable cultivation-

Adani foundation is promoting to farmers for pesticide free agriculture practices-

- i. Adani foundation run awareness camps and programs like Poshan Vatika, Kitchen Garden and Ganga Maa models program at village level. For promoting these activity 20 Women farmers has been selected from every target village. AF team regularly monitoring it for successfully making the programs.

➤ Organic Manure & pesticide preparations-

Adani foundation is promoting to organic cultivation in the project affected villages. AF is preparing vermi-wash, vermi-compost, compost manure, Natural pesticides, and bio-meal for plants with the support of Goushala at Suhira village. Linked this program to the vegetable production program so vegetable farmers would be compulsory to use this product.

➤ Capacity Building & training-

AF is providing technical support to farmers for promoting organic cultivation. In this context AF provided conducting Training awareness camp & on-field training programs with help of Krishi Vigyan Kendra Scientists. In the last six months total 10 training & awareness programme has been organized in 5 villages.

Livelihood through Skill development

➤ Training program by Union-RSETI

Adani foundation liaison with the Union bank's training institute named Union-RSETI (Rural Self Employment Training Institute) situated at Waidhan, Singrauli. Total 5 training batches has been completed of various trade such as Jute bag making- 2 batch, Motor winding & repairing – 01 batch, soft toys making– 01 batch and Artificial jewelry making – 1 batch. Total 49 candidates got benefited of this training program.

➤ Training program by Adani Foundation

Adani foundation organized total 4 batches of self-employment program of Mushroom Production- 2 batches, Self-employed tailor- 1 batch, Dhoop-Batti- 1 batch. Total 86 candidates got benefited of this training program. In which 05 were male and 81 were female candidates.

Health

➤ Hospital Facility in R & R colony-

Adani Foundation renovates the hospital for health facility in R & R (Resettlement & Rehabilitation) colony at Nagwa village. Total OPD CASES -14300 patients got benefited from this hospital. In which Pregnancy cases- 57, Lab tested- 935, Ambulance facility – 322 and so on.

➤ Specialized Health Camps-

AF has been organized 50 Specialized Health Camps in the plant affected areas. Organized camp was related to Eye, Gynecological, Pediatric, orthopedic, dental health and community medicine related. Total 3044 candidates got benefited from these camps.

➤ Theme based health awareness activities-

On the occasions of various theme-based program/day Adani foundation organized total 22 awareness program like wash day, TB Day, Cancer Day. In this total 22 program 2819 beneficiary got benefited.

Education

➤ R & R school support-

For providing best education facility to R & R affected family near plant AF tie- up with Vidya Bharati's Saraswati Shishu Mandir School. At present 1203 candidates are studying in school at different levels from std. nursery to 12th. In the school there are total no. of teaching staff is 38 and supporting staff in 08.

➤ Teaching & learning material-

AF supports to the candidate by providing books, copy, bags etc. and for physical growth of students, provided sports material like football, badminton, cricket game material to school.

➤ Support to other Govt. Schools-

Adani foundation has been supported to other govt. schools like in Bandhaura Middle school- 245 students, Semua Primary School-55, Chirihwan tola Primary School- 70 students, Karsua Lal middle school- 85 students, Potki tola primary school- 50 students, Naveen Primary school (Harijan Basti)- 50 students.

Supports & Cultural Activity-

➤ Sports events-

AF supported to village youths by providing sports activity material on gram panchayat level. Total 19 sports events have been organized by AF in the last 6 months. In which cricket tournament -02, Football game – 07, Volleyball – 02, Kabaddi -01 has been organized. AF provided football sports kit to 32 player of MP state Santosh Trophy players.

➤ Cultural Activity-

On the occasion of various cultural days AF organized events & activity like Madhya Pradesh Foundation Day, Jute bag distribution against polythene ban, Women Day Calibration etc.

Community Infrastructure Development

➤ Drainage cleaning-

In the R & R colony Nagwa drainage cleaning works done on the request of villagers. The total distance of drainage is appx. 10 km. By this activity total 720 household got benefited.

➤ Refurbishment of Anganbadi Centre-

➤ Temple Renovation-

➤ Hospital Renovation-

Main section

1.1 Education

Free Education Program for R&R Family

The adani Foundation's provide Free education to all R&R family village Nagwa, children encourage underprivileged students with promising academic records to complete school and pursue higher education. Children, especially girls, being raised by single mothers and women-headed families find special mention within this framework. So far, more than 12,00 students have benefited, with this program. In certain cases, the Foundation also facilitates sponsorships for deserving students pursuing higher education.

School improvement program

The adani Foundation began the program with the objective of establishing schools in strategic locations, where government and private schools are absent or inadequate. The Foundation ensures that this schools have modern classrooms, libraries, laboratories, playgrounds, residential quarters.

The project also improves the amenities and infrastructure at Saraswati Shishu mandir schools within the area.

Teachers' training program

Teachers are crucial to ensuring that the education imparted at school is up to established standards. The adani Foundations training program aims to make educational activities more fulfilling for teachers, who in turn make learning a meaningful experience for children.

To enhance the quality of teachers, adani foundation conducts motivational workshops and IT skills development courses. These activities have been conducted in the states of Madhya Pradesh and targeting more than 35 teachers of SSM School.



Creative methods of education

The adani Foundation promotes the use of methods such as storytelling, theater, and activity-based learning to make the learning experience more enriching for students. The education program provides IT equipment and modern educational material.

In addition, buildings and open spaces have been converted into learning aids. For instance, steps inside schools have numbers painted on them; and the various angles to which classroom doors open are painted on the floor, thus making the learning process interesting and continuous.

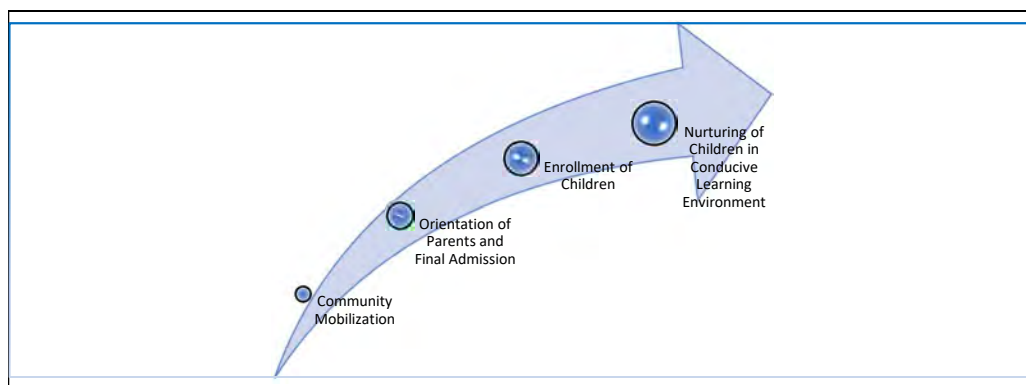
Annual Investment on Building Bright Future of Children

The annual expenses on each child are borne by Adani Foundation. The unit cost of each child ranges from Ten Thousand per Year. investment of During the financial year 2022-23, total One Crore Twenty Two Lakh for 1203 R&R Family children was supported by Adani Foundation.

Table 1 Financial Investment on Education of Children			
Year	Enrolled Students	Expenses per month/ward	Total Expenditure (in Cr)
2022-23	1203	10000	1.22 CR

Triggers of Adani Foundation

I. Community Mobilization: The families were approached to inform, educate, and sensitize on provisions and importance of education under this programme. The community were mobilized with support of SSM School Teachers, Village Resource Person, Community Leaders, and active persons which helped disseminate knowledge regarding the services.

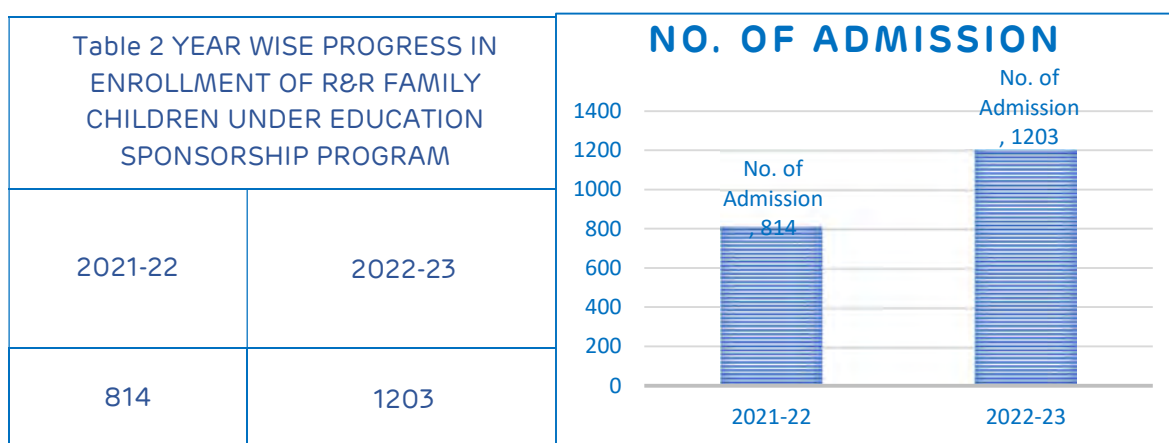


II. Orientation of Parents and Final Admission: Most parents think that enrolling their kids in the top school is good enough. However, this is not the reality. The school alone isn't

responsible for the all-round development of the kid. Your input as a parent is quite crucial. And this is where parents' orientation programs come into the picture.

The parents of all the students are invited and are given a walkthrough of all the school processes. This way parents can understand what their kid goes through each day. Parent orientation programs also help parents voice their opinions. For example, you can share what you feel about the school, the system, teachers, etc. Also, parent orientation programs help parents know about something new that has been introduced in the school for their kids.

- III. **Enrolment:** On June 2022, the parents of R&R Colony were convinced in each family to enroll their children in educational institutions. Total 1203 Students enroll in academic year 2022-23. it was challenging to retain the enrolled students and attend regular classes, AF team & School Teachers put dire efforts to stabilize and continue the regular course.

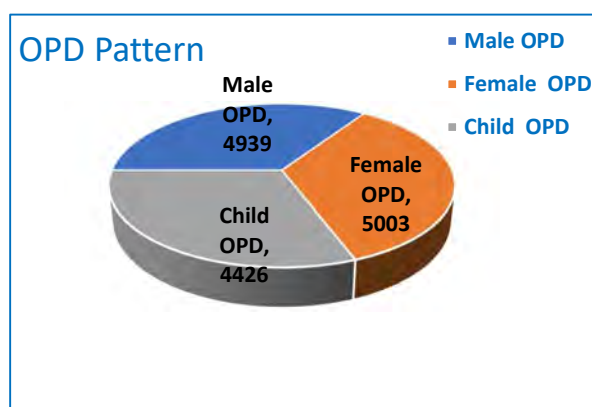


Above graph is showing that the no of admissions increased by 387 (32%) it shows that parents are aware about education.

1.2 Community Health

Hospital Facility in R & R colony-

Adani Foundation renovates the hospital for health facility in R & R (Resettlement & Rehabilitation) colony at Nagwa village. Total OPD CASES -14300 patients got benefited from this hospital. In which Pregnancy cases- 57, Lab tested- 935, Ambulance facility – 322 and so on. The hospital is serving not only to plant affected area's beneficiary but surrounding 5-6 village patients receiving the benefits of this hospital.



2 Specialized Health Camps-

AF has been organized 50 Specialized Health Camps in the plant affected areas. Organized camp was related to Gynecological, Pediatric, orthopedic, dental health and community medicine related. Total 3044 candidates got benefited from these camps.

No of Footfall / Diagnose			
Child	Male	Female	Total Footfall (Child + Male + Female)
601	870	1573	3044



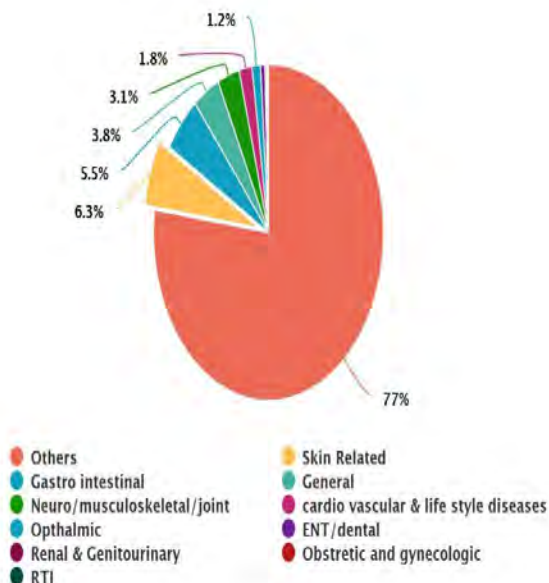
Theme based health awareness activities-

On the occasions of various theme-based program/day Adani foundation organized total 22 awareness program like wash day, TB Day, Cancer Day. In this total 22 program 2819 beneficiary got benefited.

Participants Details in Health Awareness Meeting			
Child	Male	Female	Total
287	149	2383	2819



Disease pattern



Ambulance facility

Increase in medical ailments has led to the rise in hospitals and emergency medical services assisting patients who require emergency medical assistance at critical moments helping them to reach the hospital on time thus saving their life. 24x7 hrs Ambulance Facility dedicated to Community for better health facility & Doorstep Health camp for quick facility for health service.



2.2 Sustainable Livelihood Development

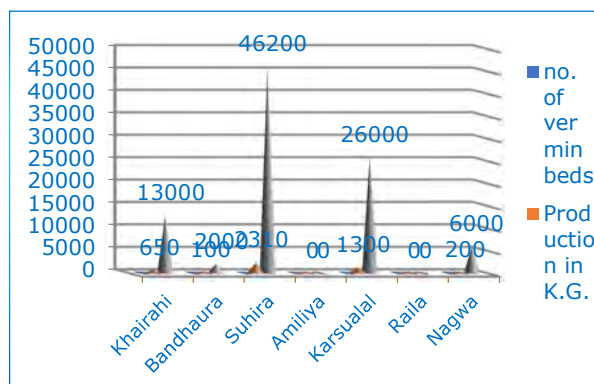
Objective is to promote inclusive growth and progress through livelihood security of all sections of society. At Singrauli site sustainable livelihood interventions are

1. Organic Manure Production -

Organic manure provides all the nutrients that are required by plants but in limited quantities. It helps in maintaining Carbon & nitrogen ratio in the soil and also increases the fertility and productivity of the soil. Apart from this there are 5 other reasons i.e. it improves airy soil structure, healthier soil and more fertile, longer period available for crops than chemical fertilizers, environmentally friendly, easy to use.

➤ Summary data of Organic Manure Production with Graph representation -

SNo	Village	No. of vermin beds	Production (KG)	Appx. Value
1	Khairahi	7	650	13000
2	Bandhaura	1	100	2000
3	Suhira	31	2310	46200
4	Amiliya	2	0	0
5	Karsualal	12	1300	26000
6	Raila	2	0	0
7	Nagwa	2	200	6000
Total		57	4560	91200





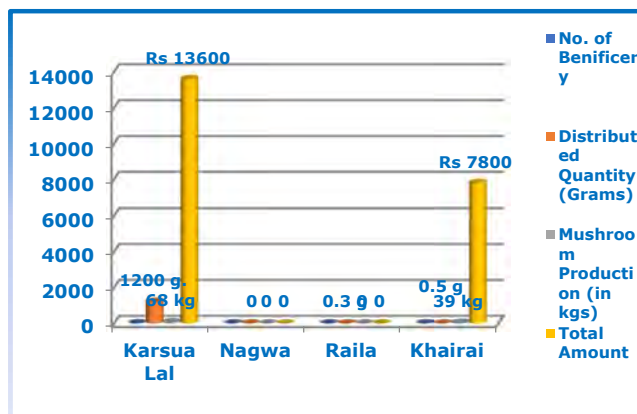
Above data shows total 57 beds have been prepared in the 7 villages. In which 31 has been prepared in the Suhira Goushala in the three phases. Normally the size of bed is 12 feet long 3 feet broad with 2'1/2 feet height of cow dang & agri. waste. Till March 23 Usha Kiran Women group, Suhira (Goushala) and other individuals had been ready the 4.5 tons of compost and this material is being selling in the market. Those farmers used this manure they gave remarkable feedbacks that production increased twice, and soil is being more fertile. Farmers are selling organic vegetables on increased rate then normally produced vegetables.

2. Oyster Mushroom Spawn Distribution and Production –

The reason behind promotion and seed distribution of Oyster Mushroom, it is high in various vitamins, including biotin, riboflavin, and pantothenic acid, as well as folate, vitamin B6 and B1. Aside from these, it contains a trace amount of selenium, zinc, iron, and phosphorus, which can help to build immunity and improve general health. Below data shows that individuals/villagers are using mushroom in their food. This will fulfill the nutrition & other supplements adequacy in their body.

➤ Summery Detail of Oyster Mushroom Production –

Villages	No. of Beneficiary	Distributed Quantity (Grams)	Mushroom Production (in kgs)	Total Amount
Karsualal	12	12 kg	68	13600
Nagwa	3	0.40 g	13	2600
Raila	3	0.30 g	0	0
Khairai	5	0.50 g	39	7800
Total	23	13.20	120	24000





Above data shows in total 23 Mushroom production unit started in the individual household in the 4 villages. Before starting the spawn distribution AF provided training in two stages of preparation of bags & harvesting process. In which 12 kg spawn distributed at Karsualal village. Total production of mushroom is 107 kgs in the last five months. Villagers are using mushroom as essential meal. Apart from this rest mushroom they are selling into the nearby market. Total quantity of 48 kgs has been sold into the market worth rs. 9600.

3. Natural Bio-meal Pesticide preparation-

S.N o.	Village	Prepared Quantity (In ltrs.)	Trial & Test	Result & Impact
01	Suhira (Goushala)	150 Litter	<ol style="list-style-type: none"> 1. It took 15 days for being ready by natural process. 2. It was prepared by SHG under the guidance of Adani Foundation. 3. For trial, natural pesticide applied with 20 farmers' farm in 5 different villages on 10 various vegetables. 4. Pesticide applied on affected plants twice in a week and for two weeks under the trial period. 	<ol style="list-style-type: none"> 1. It has phenomenal results. 2. It took hardly 3-4 days to revive the affected plant. 3. It works as plant bio-food or tonic too. 4. Effectively increases conditioning of soil also. 5. Farmers are happy and demanding training for making it on their home. 6. Due to increasing demand SHG is try to packaging & sell at small level under the guidance of Adani Foundation.

4. Vegetable Seed Distribution and Production-

Summary report of seed distribution & production-

Seed Name	Seed Distributed(g)	Production (KG)	Selling Price (Rs)
Spinach	1.46	951	12310
Radish	1.46	4743	47430
Maithi	13.1	115.27	11575
Cauliflower	2.66	3440	68800
Beetroot	0.73	400.01	6001.5
Carrot	0.64	408	6470
Tomato	1.07	3965	35170
Pea	14.06	1497	44910
Cabbage	58	2118	42360
Red Sag	1.46	1085.5	17565
Chilli	0.49	3	300
Coriander	1.72	171.5	17150
Total	96.85	18897	310042

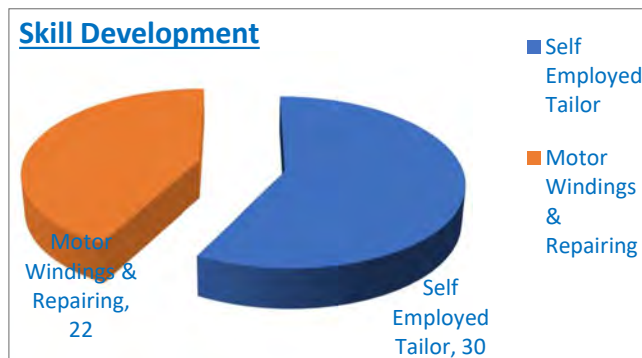
Vegetable Seed distributed by Adani foundation in the villages is 96.85 kG of different variety. Adani foundation is promoting to farmers for pesticide free agriculture practices. Adani foundation run awareness camps and programs like Poshan Vatika, Kitchen Garden and Ganga Maa models programme at village level. For promoting these activity 20 Women farmers has been selected from every target village. Adani foundation supported by giving them tested & treated seeds, bio fertilizer, green net for fencing, training on organic vegetable production and field preparation. After giving seed AF team regularly monitoring it for successfully making the programs.



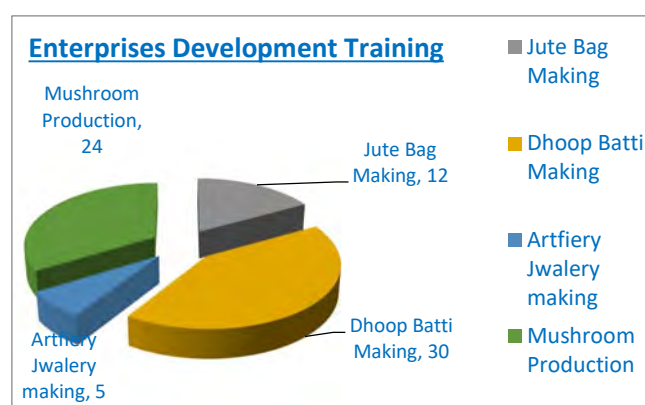
5. Skill Development and Capacity building & Training Program-

Adani Foundation (MEL) is working on livelihood through skill development program. There are many candidates who had left the education after Higher Secondary due to financial crisis in the family and looking for support to earn. Adani foundation team liaised with the govt. institution Union bank RSETI (Rural self-employment & Training Institute) and enrolled 47 candidates for residential training of Motor winding and repairing, Jute Bag Making and Artificial Jewelry making for different time. In the field AF arranged the EDP trainings related to Dhoop Batti Making, Self Employed Tailor, Mushroom Production for total no. of 84 candidates. Below given list shows the trade and the list of candidates-

1. Skill Development Trainings		
no.	Trade	No. of Candidate
1	Self Employed Tailor	30
2	Motor Windings & Repairing	22
	Total	52



2. Enterprises development training		
Sno.	Trade	No. of Candidate
1	Jute Bag Making	12
2	Dhoop Batti Making	30
3	Artificial Jewelry making	5
4	Mushroom Production	24
	Total	71



Environment Protection program (Hariyali Yajna)

To create awareness and spread the message of saving our planet- 'Protecting our environment is the need of the hour.' - To help nature and mother earth to get its natural beauty and components back.

The purpose of the drive was to educate school students about the importance of growing trees.

Benefits from this program to clean air across the Society near plant area & Controlled temperatures.

Trees help in reducing heat produced by industries. Thus, they maintain the temperature of the place. also provide a clean environment as they take in carbon dioxide and give out oxygen.

The program aimed to plant about 2000 saplings in the school and all around as well. & in this vision we successful to complete the target.



2.3 Community Infrastructure Development

R & R colony Hospital Renovation

Nagwa is situated total 40 KM far from district hospital. AF supported to complete refurbishment and renovation work oh hospitals at Nagwa village at present two doctors (Male- 1 & Female- 1) attends OPD every day. There is total 5 beds in the hospital.



Refurbishment of Anganbadi Centre-

Adani foundation Renovate the Anganbadi center of Nagwa village on the request of Panchayat elected people. Now after completion of Anganbadi center total 32 beneficiaries receiving the benefits of it at present.



Temple Renovation-

adani foundation supported to the villagers on the religious ground by renovating the Shiv temple.



Drainage cleaning-

In the R & R colony Nagwa drainage cleaning works done on the request of villagers. The total distance of drainage is appx. 10 km. By this activity total 720 household got benefited.



Safe Drinking Water (Handpumps & Water tanker)

- Handpumps are the only source of drinking water in Nagwa village, on which the lives of the villagers depend.
- There is a total of 50 handpumps in the rural area, out of which 27 handpumps were defective for a long time, which was repaired by Adani and helped the villagers.



Sports Activity for Youths

For the overall Development of Youths and positive relation with Community, AF Singraulli team conducted, 8 no's Football Tournaments, 5 Nos cricket tournament, 02 nos. Volleyball tournament, 2 nos Kabaddi Tournament, o2 Nos Athletic tournaments



2.4 Case stories (max 3 stories - indicating outcome /impact of intervention)

First story -

Sitawati Jaiswal, Poshan Vatika

Sitawati Jaiswal, w/o Anand Prasad Jaiwal age 40 is living at karsualal village near Adani plant (Mahan Energy Limited) at Singrauli district. She is a housewife, and her husband is a farmer and She lost his agriculture land in plant establishment. The total land she lost is 1 acre of land. Land was the only source of surviving her family. Her family does not have any livelihood sources other than lost land. He worked as labourer on others farm. She has 2 kids- one boys & one girl. Her husband doesn't earn as much as so he can support to his family at village. In oct. 2022-month Satkumari, village coordinator of Adani Foundation visited to Sitawati's house and explained the benefits of organic Poshan Vatika (vegetable production) and then her family agreed to do organic vegetable production, and then officer of Adani Foundation visited to his house and explained complete process of organic vegetable production at home. AF provided her to vegetable seeds and material required for vermin bed preparation like black & thick polythene, earth warms and training to preparing the vermin beds. Then sitawati and her husband prepared one vermi-bed and did make the poshan vatika structure. Adani Foundation facilitated to her by giving training and all the technical aspects i.e., preparation of basal dose of land before sowing the seeds, use of agriculture wastages & cow dang, size of polythene, quantity of earth warm and quantity of vermi-compost use in the field. After one-month poshan vatika production was started and the rate of selling vegetable was high then the normally produced vegetables. She got production from Poshan vatika is spinach-5 kg, Raddish- 10 kg, Cauliflower-20 kg, Beetroot – 5 kg, Carrot- 8 kg, Tomatto-8 kg, Pea- 8 kg, Red Spinach- 12 kg. etc. The total cost of these vegetable is rs. 5200. Some quantity she sold and some she had used for self. She felt happy when she checked the market value of organic products. Sitawati is also using vegetable in their meal for getting better health. Now she has start promoting to the other women and explaining the importance of organic vegetable production and feeling happy to get another sustainable livelihood source



2nd Story-

Science Exhibition in SSM School

Adani Foundation decided to organize a science exhibition for the first time at Saraswati Shishu Mandir School in a village named Nagwa in Singrauli district. The Foundation believed that this would provide a platform to the students to showcase their innovative ideas and creative thinking. This created an atmosphere of excitement in the school as the students were preparing for the exhibition. Due to this activity student are spending long hours in the school laboratory for brainstorming ideas and experiment. Each student was determined to make their project stand out and impress the instructor. On the day of the exhibition, there were crowd of in the school ground of parents, teachers, and prominent members of the community. The exhibition set up was in the school hall, and the students proudly presented their projects to the visitors.



There were variety of models on display, including working models of wind turbines, solar panels, and water filtration systems. Demonstrations were also held on topics such as climate change, pollution, and sustainable energy.

The Teachers were impressed by the creativity and enthusiasm of the students and found it difficult to choose the winners. After much deliberation, the top three projects were selected, and the winners were awarded by Adani Foundation.



The science exhibition was a great success and left a lasting impression on the students. This inspired him to pursue his interest in science and technology and work towards finding solutions to some of the world's most pressing problems.

The Adani Foundation was thrilled with the success of the exhibition and promised to hold more such events in the future. He hoped that this would encourage more students to take interest in science and technology and help them become innovators and problem solvers of the future.

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3rd Story-

Pritam's Joyful Delivery

Pritam Sharma W/O- Pradeep Kumar Sharma is a young woman living in Khairahi village area of Singrauli district, India. She was pregnant with her first child and very excited but nervous about the upcoming delivery. She knew that giving birth to a child could be difficult and dangerous, especially without proper medical care.

Fortunately, the Adani Foundation, a non-profit organization that supports community development projects, recently launched a program to provide medical assistance to pregnant women in the area. Under this program, he arranged for a new ambulance to be delivered to the village where Pratin lived. When Pritam went into labor, her family immediately called the Adani Foundation's ambulance. Within minutes an ambulance arrived and trained medical staff on board immediately assessed Pritam's condition. They determined that she needed to be taken to the nearest hospital for delivery.

Adani Foundation's ambulance was equipped with all necessary medical equipment and supplies to ensure a safe journey to the hospital. The ambulance staff carefully loaded Pritam onto a stretcher and made sure she was comfortable for the journey. On the way to the hospital, ambulance crews monitored Pritam's vital signs and gave her pain relief. He reassured her that everything would be fine and that she was in good hands.

Thanks to the ambulance service of Adani Foundation, Shanti reached the hospital safely and gave birth to a healthy baby girl. The Adani Foundation continued to provide post-delivery care and support to Pritam and her family.

Pritam was grateful for the help and support of the Adani Foundation during such a crucial moment in her life. She knew that without their assistance, her delivery could have been much more difficult and dangerous. She felt fortunate to have such excellent medical care, and her baby girl was a testament to the value of the work of the Adani Foundation.



Employee Volunteer Engagement

For communities, employee volunteering provides a skilled and talented volunteer pool, as employees devote personal and professional skills to community needs, Business HoDs wives support to villagers in different program and mobilize them with their experiences and ensure them for better support by Adani.

Participation in Children Day Celebration & Republic day celebration at School



Skill Training support & Encouragement



S

Distribution of Winter Cloths among poor villagers



Appreciation letter from stakeholder(s)

कार्यालय ग्राम पंचायत क्षेत्र खैराही

जनपद पंचायत वैद्वन, जिला-सिंगरौली (म० प्र०) 486886

मुस्ताक अहमद

सरपंच

मो० 9165538965
7773817703



निवास- ग्राम खैराही
जिला- सिंगरौली (म० प्र०)
पिन कोड- 486886

पत्रांक..37.....

दिनांक..05/01/2023..

आप दिनांक 05/01/2023 को ग्राम पंचायत खैराही में
आडाणी काउन्सिल के पास (सिंगरौली) के स्वाम 200 लोगो
को निकाला, निष्का, विदुर एवं गोरख लोगो को
कमबल निराल किश गाय; धानकल आडाणी काउन्सिल
को, उलो वद से स्वाम लाग्य लर गोर विदुर) रीमल
किश लाग्य,

मुस्ताकअहमद
सरपंच
ग्राम पंचायत क्षेत्र खैराही
जनपद पंचायत वैद्वन
जिला-सिंगरौली (म० प्र०)

2.6 Beneficiaries count

S.No.	Activity Description	Direct	Indirect	Access
A.	Education			
1	Free education to R & R families	1203	4600	
2	Free bag distribution & stationery	1753	3400	
3	Science Exhibition	200	1000	
4	Inter school Sports tournament	200	1500	
B.	Community Health			
1	R & R hospital	14368	23544	
2	Health Camp	3044	10000	
3	Blankets Distribution	1100	1900	
4	Mosquito net	300	600	
C.	Sustainable Livelihood Development			
1	Livelihood by Enterprises Development	18	72	
2	Livelihood through Skill Development	123	466	
3	Mushroom Production	23	125	
4	Organic practices on agriculture	53	450	
5	Capacity building & Training	65	230	
D.	Community Infrastructure Development			
1	R & R hospitals	5000	20000	
2	Anganwadi center	32	100	
3	Drainage Cleaning	720	2100	
4				

* Refer attachments:

- Guidance on Calculation of Beneficiaries of AF CSR Projects
- FAQ-Beneficiaries Count

Adani Foundation team

S.No.	Name	Position
1.	Mr. Manoj Prabhakar	Program Manager
2.	Mr. Rishabh Panday	Project Officer (Health & Education)
3.	Mr. Vikas Rai	Project Officer (SLD)
4.	Kamlesh Kumari	Village Coordinator
5.	Sat Kumari Jaiswal	Village Coordinator



Site office address:

Mahan Energen Limited, Village – Bandhaura, Post –Karsualal, Tahsil – Mada,
District- Singrauli
Pin- 486886



Power

Ref: APL/MEL/Env/PCCF/407/23

Date: 03.04.2023

To,

The Principal Chief Conservator of Forest (Wildlife),
Pragati Bhawan, Bhopal Vikas Pradhikaran,
3rd Floor, M.P Nagar, Bhopal
Madhya Pradesh - 462011

Sub.: Submission of Ecological Assessment and Flora Fauna Wildlife Conservation and Management Plan for Operational 1200 (2x600) MW Thermal Power Plant with proposed Expansion of Bandhaura Ultra Super Critical Thermal Power Plant at Village Bandhaura, Tehsil Mada, District Singraulli, Madhya Pradesh by Mahan Energen Limited.

**Ref.: 1. Environmental Clearance (EC) vide File no. J-13011/56/2006. IA. II(T) dated 20.04.2007 and amendments on 10.02.2009, 23.08.2013 and 08.04.2016.
2. Certified EC compliance by MoEFCC, IRO, Bhopal vide File no. 4(O)1/2022(Env.) I/10563/2022 (2) dated; 02.09.2022.**

Dear Sir,

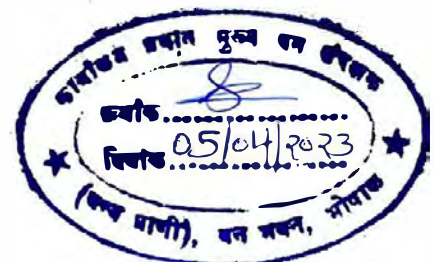
With reference to above mentioned subject, the Ministry of Environment, Forest & Climate Change (MoEFCC) has granted Environmental Clearance vide letter no **J-13011/56/2006-IA.II (T)** dated: 20.04.2007 and its subsequent amendments dated 10.02.2009, 23.08.2013, 08.04.2016. Subsequently transfer of EC to **Mahan Energen Limited (MEL) on 15.09.2022.**

In compliance of the **Specific Condition no: xiii of EC**; "A conservation Plan for Schedule -I animals reported in the study area of the project shall be prepared in consultation with an expert organization and duly approved by state wildlife department of Madhya Pradesh". during the plant site visit by **MoEF&CC, Integrated Regional Officer, Bhopal** for certification of EC Compliance status vide letter / File no. 4(O)1/2022(Env.) I/10563/2022 (2) dated; 02.09.2022.

MEL has also proposed to undertake expansion of the existing plant of Bandhaura Ultra Super Critical Thermal Power Plant by adding 1600 (2x800) MW to existing 1200 (2x600) MW **within the existing plant boundary / areas** at Village Bandhura, Tehsil Mada, District Singraulli, Madhya Pradesh.

Mahan Energen Ltd
(Formerly Essar Power MP Ltd)
Adani Corporate House
Shantigram, S G Highway
Ahmedabad 382 421
Gujarat, India
CIN: U40100DL2005PLC201961

Tel +91 79 2555 4444
Fax +91 79 2555 7177
www.adanipower.com





Power

We are submitting herewith the Ecological Assessment and Flora & Fauna Wildlife Conservation & Management Plan, which is prepared by M/s Good Earth Enviro Care in Association with Department of Environment Management, Indian Institute of Social Welfare & Business Management, Kolkata (Kolkata University & NABET Members).

The Wildlife Conservation Plan prepared by consultant is hereby submitted for your kind Pursual.

Solicit your suggestion and recommendation.

Thanking You,

Your's faithfully

for **Mahan Energen Limited**

(Authorized Signatory)

Head – Environment & Forest

Encl: Ecological assessment and flora fauna & Wildlife Conservation and Management Plan for Mahan Energen Limited

- CC:**
1. **Integrated Regional Office,** Ministry of Environment, Forest & Climate Change, Kendriya Paryavaran Bhavan, Link Road No. 3, Ravi Shankar Nagar, Bhopal (M.P) – 462016
 2. **The District Forest Officer,** Majan Road, Waidhan, Singrauli, Madhya Pradesh – 486889.
 3. **The Regional Officer,** Madhya Pradesh Pollution Control Board, Regional Office, Waidhan, Singrauli, M.P. -

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adani

Power

Ref: APL/MEL/Env/CGWA/404/23

Date: 03.04.2023



To,

The Regional Director

Central Ground Water Board,

North Central Region, Block-1,

4th Floor, Paryawas Bhawan Area Hills,

Jail Road, Bhopal - 462011, Madhya Pradesh

Sub.: Submission of Hydrogeology Assessment & Rainwater Harvesting Study Report for operational 1200 (2x600) MW Thermal Power Plant with proposed Expansion of Bandhaura Ultra Super Critical Thermal Power Plant at Village Bandhaura, Tehsil Mada, District Singraulli, Madhya Pradesh by Mahan Energen Limited.

Ref.: 1. Environmental Clearance (EC) vide File no. J-13011/56/2006. IA. II(T) dated 20.04.2007 and amendments on 10.02.2009, 23.08.2013 and 08.04.2016.

2. Certified EC compliance by MoEFCC, IRO, Bhopal vide File no. 4(0)1/2022(Env.) I/10563/2022(2) dated; 02.09.2022.

Dear Sir,

With reference to above mentioned subject, the Ministry of Environment, Forest & Climate Change (MoEFCC) has granted Environmental Clearance vide letter no **J-13011/56/2006-IA. II (T)** dated: 20.04.2007 and its subsequent amendments dated 10.02.2009, 23.08.2013, 08.04.2016. Subsequently EC transferred to **Mahan Energen Limited (MEL) on 15.09.2022.**

In compliance of the **Specific Condition no: xiv of EC**; "Rain water Harvesting shall be practiced. A detailed scheme for Rainwater harvesting to recharge the ground water aquifer shall be prepared in consultation with Central Ground Water Authority/ State Ground water Board" and **MoEF&CC, Integrated Regional Office, Bhopal** was visited plant site on 02.05.2022 & suggested to submit Rainwater harvesting plan to CGWA in respect of certified EC Compliance report vide File no. 4(0)1/2022(Env.) I/10563/2022(2) dated; 02.09.2022.

MEL has also proposed to undertake expansion of the existing project of Bandhaura Ultra Super Critical Thermal Power Plant by adding 1600 (2X800) MW to existing 1200 (2X600) MW **within the existing plant boundary/area** at Village Bandhura, Tehsil Mada, District Singraulli, Madhya Pradesh.

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Power

We are submitting herewith the Hydrogeology Assessment & Rainwater Harvesting Study Report, which is prepared by M/s Akshar Geo Services, Bhuj – Kutch, Gujarat.

The Rainwater Harvesting Study Report prepared by consultant is hereby submitted for your kind perusal.

Solicit your suggestion and recommendation.

Thanking You,

Yours faithfully

for **Mahan Energen Limited**

(Authorized Signatory)

Head-Environment & Forest

Encl: Hydrogeology Assessment & Rainwater Harvesting Study for Mahan Energen Limited.

CC: The Member Secretary

Central Ground Water Authority
18/11, Jamnagar House, Man Singh Road
New Delhi-110011

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