

**SIX-MONTHLY ENVIRONMENTAL COMPLIANCE
REPORT OF STIPULATED CONDITIONS OF
ENVIRONMENTAL CLEARANCE**

(April, 2024 to September, 2024)

For

**Proposed 55 KLD Grain Based Distillery along with 2.0 MW Co-
generation Power Plant**

By

**M/s Shri Gang Industries and Allied Products Limited
Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area
Sandila Phase IV, Lucknow Hardoi Road, Sandila
District: Hardoi (U.P.) - 241204**

For Submission to:

**Ministry of Environment, Forest & Climate Change
(Regional Office, Lucknow)**

Submitted By:

**M/s Shri Gang Industries and Allied Products Limited
Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area
Sandila Phase IV, Lucknow Hardoi Road, Sandila
District: Hardoi (U.P.) - 241204**

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CHAPTER No. 01: INTRODUCTION AND PROJECT DESCRIPTION

Six monthly environmental compliance/status report is submitted for Proposed 55 KLD Grain based Distillery along with 2.0 MW Co-generation Power Plant by M/s Shri Gang Industries and Allied Products Limited for April, 2024 to September, 2024. The Project is located at Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area, Sandila Phase IV, Lucknow Hardoi Road, Sandila, District: Hardoi (U.P.) - 241204.

Prior Environment Clearance was obtained from State Level Environment Impact Assessment Authority, Uttar Pradesh wide letter no.: **554/Parya/SEAC/4450/2018, dated 11th December, 2018.** Consent to Establish obtained for the project Vide Ref No. **154037/UPPCB/Unnao(UPPCBRO)/CTE/HARDOI/2022** dated 25/04/2022 & Consent to operate for Air & Water Vide Ref No. **159599/UPPCB/Unnao(UPPCBRO)/CTO/both/HARDOI/2023** dated **23/12/2023** valid upto 31/12/2028. Copy of CTO & CTE are attached here as **Annexure-1.**

Specific and general conditions stipulated in Environment Clearance have been complied during construction and post construction phases.

Environmental mitigation measures described in Environmental Management Plan are being implemented operation phase. **M/s Shri Gang Industries and Allied Products Limited** management team is fully conscious about Environmental Management and enhancing green belt development in project surrounding area.

Six monthly compliance/ status reports for **April, 2024 to September, 2024** for conditions stipulated in the Environmental Clearance letter issued by SEIAA, UP is enclosed as **Annexure-2.** Photographs view of implemented mitigation measures are also attached for the ready reference as Photo Documentation.

**CHAPTER No. 02:
COMPLIANCE OF STIPULATED CONDITIONS OF
ENVIRONMENTAL CLEARANCE**

Name of the Project: Proposed 55 KLD Grain Based Distillery along with 2.0 MW Co-generation Power Plant at Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area, Sandila Phase IV, Lucknow Hardoi Road, Sandila, District: Hardoi (U.P.) - 241204 by M/s Shri Gang Industries and Allied Products Limited.

Clearance Letter No: 554/Parya/SEAC/4450/2018, dated 11th December, 2018

Period of Compliance Report: (April, 2024 to September, 2024)

I. STATUTORY COMPLIANCE		
Sr. No.	Statutory	Compliances
1.	The project proponent shall obtain forest clearance under the provision of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.	Not Applicable, as there is no forest land involved in this project.
2.	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	Not Applicable, there is no wild life sanctuary within 10 km radius.
3.	The project proponent shall prepare a site-specific conservation plan and wildlife management plan and approved by the chief wildlife warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with six-monthly compliance report. (In case of the presence of schedule -I species in the study area).	No schedule-I species is found in study area, hence this condition is not applicable.
4.	The project proponent shall obtain Consent to Establish/ Operate under the provision of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board/Committee.	The CTE (Consent to Establish) application has been Obtained from UPPCB vide letter no. 154037/UPPCB/Unnao(UPPCBR O)/CTE/HARDOI/2022, Dated: 25.04.2022 . & Consent to operate for Air & Water Vide Ref No. 159599/UPPCB/Unnao(UPPCBR O)/CTO/both/HARDOI/2023 dated 23/12/2023 Copy of CTE & CTO attached as Annexure-1 .
5.	The project proponent shall obtain authorization under	Unit obtained the Consolidated

	the Hazardous and other Waste Management Rules, 2016 as amended from time to time.	Consent to Operate and Authorisation on 12.05.2023. Copy of same is attached.
6.	The company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989	The point is noted.
II. AIR QUALITY MONITORING AND PRESERVATION:		
1.	The project proponent shall install 24 x 7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Condition noted and complied.
2.	The project proponent shall install system carryout to Ambient Air Quality monitoring for common/criterion parameter relevant to the main pollutant released (e.g. PM ₁₀ and PM _{2.5} in reference to PM emission, and SO ₂ and NO _x in reference to SO ₂ and NO _x emission) within and outside the plant area at least at four location (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions. (case to case basis small plants; Manual; Large Plants: Continuous)	Monitoring reports are attached as Annexure- 3
3.	The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring of air quality/fugitive emission to Regional Office of MoEF & CC, Zonal office of CPCB and Regional Office of SPCB along with Six-monthly monitoring report.	Condition noted and complied. Ambient Air quality Monitoring has been done at 05 locations; Monitoring reports are attached as Annexure- 3.
4.	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable source, so as to comply prescribed stack emission and fugitive emission standards.	Condition noted and complied. Ambient Air quality Monitoring has been done at 05 locations; Monitoring reports are attached as Annexure- 3.
5.	The National Ambient Air Quality Emission Standard issued by the Ministry vide G.S.R No. 826 (E) dated 16 th November, 2019 shall be complied with.	Point is noted and complied.
6.	Sulphur content should not exceed 0.5% in the coal for	Point is noted and same has been

	use in coal fired boilers to control particulate emission within permissible limits (as applicable). The gaseous emission shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.	complied.
7.	The D.G set shall be equipped with suitable pollution control device and adequate stack height so that the emissions are in conformity with the extant regulation and the guidelines in this regard.	Point is noted
8.	Storage of raw materials, coal etc shall be either stored in soils or in covered areas to prevent dust pollution and other fugitive emissions.	Point is noted.
III. WATER QUALITY MONITORING AND PRESERVATION		
1.	For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises (applicable in case of the projects achieving ZLD) and connected to SPCB and CPCB online servers.	Unit has install OCMS for the effluent & web camera at drain carrying the effluent as per CPCB guidelines.
2.	Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises (applicable in case of the projects achieving the ZLD).	In no any case treated water is discharge outside the premises as unit is based on Zero Liquid Discharge. ETP, RO & MEE is installed to take care the proposed effluent load.
3.	Process effluent/ any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.	Unit is based on Zero Liquid Discharge strategy, no effluent is discharge outside premises.
4.	The effluent discharge shall conform to the standards prescribed under the Environment (Protection) Rules, 1986, or as specified by the State pollution Control Board while granting Consent under the Air/Water Act, whichever is more stringent.	NOC for ground water abstraction has been obtained from UPGWD.
5.	Total fresh water requirement shall not exceed the proposed quantity or as specified by the Committee. Prior permission shall be obtained from the concerned regulatory authority/CGWA In this regard.	NOC for ground water abstraction has been obtained from UPGWD.
6.	Industrial/trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP and then passed through RO system.	Point noted and complied.
7.	The company shall harvest rainwater from the roof	Rain water harvesting tank of

	tops of the buildings and storm water drains to recharge the ground water and utilize the same for different industrial operation within the plant.	capacity : 45,377 Cum is proposed in EIA / EMP report. Rain Water harvesting tank has been constructed and industry also adopted pond out side the premises for artificial rain water recharge.
IV. NOISE MONITORING AND PREVENTION		
1.	Acoustic enclosure shall be provided to DG set for controlling the noise pollution.	Condition noted and same has complied.
2.	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation.	Condition noted. Ambient Noise Level Report is attached as Annexure-3
3.	The ambient noise levels should conform to the standards prescribed under E(P) A Rules,1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.	Point is noted and Monitoring reports are attached as Annexure- 3.
V. ENERGY CONSERVATION MEASURES		
1.	The energy sources for lighting purposes shall preferably be LED based.	Point is noted and complied.
VI. WASTE MANAGEMENT		
1.	Hazardous chemicals shall be stored in tank, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm and the solvent transfer through pumps.	Point is noted and complied.
2.	Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.	Point is noted. Waste generated is being recycled in-house/ co-processed through authorized recyclers / disposal to CHWTSD vendor after commissioning of plant.
3.	The company shall undertake waste minimization measures as below. <ul style="list-style-type: none"> i. Metering and control of quantities of active ingredients to minimize waste. ii. Reuse of by products from the process as raw materials or as raw material substitutes in other processes. iii. Use of automated filling to minimize spillage. iv. Use of close feed system into batch reactors. v. Venting equipment through vapour recovery system. vi. Use of high-pressure hoses for equipment 	Point is noted and complied.

	clearing to reduce wastewater generation	
VII. GREEN BELT		
1.	Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.	Unit has developed green belt as per the norms. (Approx. 33% of total area ie. 4.0 ha).
VIII. SAFETY, PUBLIC HEARING AND HUMAN HEALTH ISSUES		
1.	Emergency preparedness plan based on the Hazard Identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Emergency preparedness plan based on the Hazard Identification and Risk Assessment (HIRA) has been done within premises.
2.	The PP shall provide Personal Protection Equipment (PPE) as per the norms of Factory Act	Condition noted and complied.
3.	Training shall be imparted to all employees on safety and health aspects of chemicals handling Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.	The employees/operators have been provided with adequate Personal Protection Equipment (PPE) as per the norms of factory Act.
4.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Condition noted and complied.
5.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Condition noted and complied. Labour hutment colony builds by construction agency L&T near the site with all facilities and provisions and ensuring all Covid appropriate behavior and protocols.
6.	There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places.	Occupational health surveillance of the workers has been done on a regular basis and records has been maintained as per the Factories Act.
IX. CORPORATE ENVIRONMENT RESPONSIBILITY		
1.	The project proponent shall comply with the provision contained in this Ministry OM vide F.No. 22-65/2017 – IA.III dated 01 st May 2018, as applicable, regarding Corporate Environment Responsibility.	Point is noted and complied within five-year plan.
2.	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper	Point is noted and company's environmental policy is well documented and made available to all stakeholders.

	checks and balances and to bring into focus any infringements /deviation / violation of the environment/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environment/forest/wildlife norms I conditions and / or shareholders/stake holder. The copy of the board resolution in this regard shall be submitted to the MoEF & CC as a part of six – monthly report.	
3.	A separate Environmental cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.	Point is noted and complied.
4.	Action plan for implementing EMP and environment conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environment protection measures shall be kept in separate account and not to be diverted for any other purpose. Year’s wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the six-monthly Compliance Report.	Point is noted complied.
5.	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Point is noted and complied.
X. MISCELLANEOUS		
1.	Directions/suggestion given during public hearing and commitment made by the project proponent should be strictly compiled.	
2.	The project proponent shall make public the environmental clearance granted for their project along with the environmental condition and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent’s website permanently.	Public notice has been published and Copy of Environmental Clearance is attached
3.	The copies of the environmental clearance shall be submitted by the project proponent to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	Complied.
4.	The project proponent shall upload the status of the	Point is noted and complied.

	compliance of the stipulated environment clearance condition, including results of monitored data and in conditions, including results of monitored data on their website and update the same on half-yearly basis.	
5.	The project proponent shall monitor the criteria pollutants level namely; PM ₁₀ , SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	Monitoring reports are attached as Annexure- 3.
6.	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the Ministry of Environment, Forest and Climate Change at environmental clearance portal.	Point is noted and complied.
7.	The project proponent shall submit the environmental statement for each financial year in form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	Point is noted and complied as per rule.
8.	The project proponent shall inform the Regional Office as well as the Ministry, the date of development work and start of production operation by the project.	Point is noted.
9.	The project authorities must strictly adhere to the stipulation made by the State Pollution Control Board and the State Government.	Point is noted and complied.
10.	The project proponent shall abide by all the commitment and recommendation made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Point is noted.
11.	No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF & CC).	Point is noted
12.	Concealing factual data or submission of false fabricated data may result in revocation of this environmental clearance and attract action under the provision of Environment (Protection) Act, 1986.	Point is noted.
13.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Point is noted
14.	The Ministry reverse the right to stipulate additional conditions if found necessary.	Point is noted

15.	The company in a time bound manner shall implement these conditions.	Point is noted
16	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. the project authorities should extend full corporation to the officer (s) of the Regional office by furnishing the requisite data/ information/ monitoring reports.	Point is noted
17.	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Trans boundary Movement) Rules, 2016 and the public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Court of Law relating to the subject matter.	Point is noted.
18.	Any appeal against this EC shall lie with National Green Tribunal, if preferred, with a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010.	Point is noted.

CHAPTER No. 03: DETAILS OF ENVIRONMENTAL MONITORING

3.1 AMBIENT AIR QUALITY MONITORING

3.1.1 Ambient air Quality Monitoring Stations

Ambient air quality monitoring has been carried out Near Main Gate of Premises, Near Project Area, Village: Muradnagar, Village: Bakhsh Khera and Village: Mahsona to assess the ambient air quality. This will enable to have analytical understanding about air quality and the changes in the air environment in the study area with respect to the condition prevailing. The locations of the ambient air quality monitoring stations are given in **Table - 3.1**.

Table - 3.1: Details of Ambient Air Quality Monitoring Stations

Sr. No	Location Code	Location Name/ Description	Environmental Setting of Surrounding
1.	AAQ - 1	Near Main Gate of Premises	Industrial
2.	AAQ - 2	Near Project Area	Industrial
3.	AAQ - 3	Village: Muradnagar	Residential
4.	AAQ - 4	Village: Bakhsh Khera	Residential
5.	AAQ - 5	Village: Mahsona	Residential

AAQ-1: Near Main Gate of Premises

The sampler was placed Near Main Gate of Premises and was free from any obstructions. Surroundings of the sampling site represent industrial environmental setting.

AAQ- 2: Near Project Area

The sampler was placed Near Project Area and was free from any obstructions. Surroundings of the sampling site represent industrial environmental setting.

AAQ-3: Village: Muradnagar

The sampler was placed Village: Muradnagar and it was also free from any obstructions. Surroundings of the sampling site represent residential environment setting.

AAQ-4: Village: Bakhsh Khera

The sampler was placed Village: Bakhsh Khera and it was also free from any obstructions. Surroundings of the sampling site represent residential environment setting.

AAQ-5: Village: Mahsona

The sampler was placed Village: Mahsona and it was also free from any obstructions. Surroundings of the sampling site represent residential environment setting.

3.1.2 Ambient Air Quality Monitoring Methodology

Monitoring was conducted in respect of the following parameters:

- Respirable Suspended Particulate Matter (PM₁₀)
- Fine Particulate Matter (PM_{2.5})
- Sulphur Dioxide (SO₂)
- Oxides of Nitrogen (NO_x)

The duration of sampling of PM₁₀, PM_{2.5}, SO₂ and NO_x was 24 hourly continuous sampling per day duration monitoring. The monitoring was conducted for one day at the location. This is to allow a comparison with the National Ambient Air Quality Standards.

The air samples were analyzed as per standard methods specified by Indian Standards (IS: 5182). The techniques used for ambient air quality monitoring and minimum detectable levels are given in **Table - 3.2**.

Fine Particulate Sampler instruments have been used for monitoring Particulate Matter 2.5 (PM_{2.5} i.e. <2.5 microns), and Respirable Dust Sampler with gaseous sampling attachment was used for sampling Respirable fraction (<10 microns), gaseous pollutants like SO₂, and NO_x.

Table - 3.2: Techniques used for Ambient Air Quality Monitoring

Sr. No	Parameter	Technique	Range of testing /limit of detection
1.	Respirable Suspended Particulate Matter (PM ₁₀)	Respirable Dust Sampler, with cyclone separator, Gravimetric Method	5.0 - 1200
2.	Fine Particulate Matter (PM _{2.5})	Fine Particulate Sampler, Gravimetric Method	2.0 - 500
3.	Sulphur dioxide	Modified West and Gaeke	5.0 - 1050
4.	Oxides of Nitrogen	Jacob & Hochheiser	6.0 - 750

3.1.3 Ambient Air Quality Monitoring Results Near Main Gate of Premises

The detailed on-site monitoring results of PM_{2.5}, PM₁₀, SO₂ and NO_x are presented in **Table - 3.3**.

Table - 3.3: Ambient Air Quality Monitoring Results Near Main Gate of Premises

Sr. No	Particulars	Protocol	Unit	Result	Range of testing /limit of detection	Standard as per NAAQS; dated 18/11/ 2009
1	Particulate matters size less than 10 µm (PM ₁₀)	IS: 5182 (Part-23): 2006 Reaffirmed: 2017	µg/m ³	89.6	5.0 - 1200	For 24 hour =100
2	Particulate matters size less than 2.5 µm (PM _{2.5})	IS: 5182 (Part-24): 2019	µg/m ³	53.55	2.0 - 500	For 24 hour =60
3	Sulphur Dioxides (SO ₂)	IS: 5182 (Part-2): 2001 Reaffirmed: 2017	µg/m ³	15.46	5.0 - 1050	For 24 hour =80
4	Oxides of nitrogen (NO _x)	IS: 5182 (Part-6): 2006 Reaffirmed: 2017	µg/m ³	22.04	6.0 - 750	For 24 hour =80

3.1.4 Ambient Air Quality Monitoring Results Near Project Area

The detailed on-site monitoring results of PM_{2.5}, PM₁₀, SO₂ and NO_x are presented in **Table - 3.4.**

Table - 3.4: Ambient Air Quality Monitoring Results Near Project Area

Sr. No	Particulars	Protocol	Unit	Result	Range of testing /limit of detection	Standard as per NAAQS; dated 18/11/ 2009
1	Particulate matters size less than 10 µm (PM ₁₀)	IS: 5182 (Part-23): 2006 Reaffirmed: 2017	µg/m ³	84.2	5.0 - 1200	For 24 hour =100
2	Particulate matters size less than 2.5 µm (PM _{2.5})	IS: 5182 (Part-24): 2019	µg/m ³	52.36	2.0 - 500	For 24 hour =60
3	Sulphur Dioxides (SO ₂)	IS: 5182 (Part-2): 2001 Reaffirmed: 2017	µg/m ³	14.76	5.0 - 1050	For 24 hour =80
4	Oxides of nitrogen (NO _x)	IS: 5182 (Part-6): 2006 Reaffirmed: 2017	µg/m ³	20.23	6.0 - 750	For 24 hour =80

3.1.5 Ambient Air Quality Monitoring Results at Village: Muradnagar

The detailed on-site monitoring results of PM_{2.5}, PM₁₀, SO₂ and NO_x are presented in **Table - 3.5.**

Table - 3.5: Ambient Air Quality Monitoring Results at Village: Muradnagar

Sr. No	Particulars	Protocol	Unit	Result	Range of testing /limit of detection	Standard as per NAAQS; dated 18/11/ 2009
1	Particulate matters size less than 10 µm (PM ₁₀)	IS: 5182 (Part-23): 2006 Reaffirmed: 2017	µg/m ³	77.3	5.0 - 1200	For 24 hour =100
2	Particulate matters size less than 2.5 µm (PM _{2.5})	IS: 5182 (Part-24): 2019	µg/m ³	48.28	2.0 - 500	For 24 hour =60
3	Sulphur Dioxides (SO ₂)	IS: 5182 (Part-2): 2001 Reaffirmed: 2017	µg/m ³	12.66	5.0 - 1050	For 24 hour =80
4	Oxides of nitrogen (NO _x)	IS: 5182 (Part-6): 2006 Reaffirmed: 2017	µg/m ³	17.32	6.0 - 750	For 24 hour =80

3.1.6 Ambient Air Quality Monitoring Results at Village: Bakhsh Khara

The detailed on-site monitoring results of PM_{2.5}, PM₁₀, SO₂ and NO_x are presented in **Table - 3.6.**

Table - 3.6: Ambient Air Quality Monitoring Results at Village: Bakhsh Khara

Sr. No	Particulars	Protocol	Unit	Result	Range of testing /limit of detection	Standard as per NAAQS; dated 18/11/ 2009
1	Particulate matters size less than 10 µm (PM ₁₀)	IS: 5182 (Part-23): 2006 Reaffirmed: 2017	µg/m ³	76.8	5.0 - 1200	For 24 hour =100
2	Particulate matters size less than 2.5 µm (PM _{2.5})	IS: 5182 (Part-24): 2019	µg/m ³	46.61	2.0 - 500	For 24 hour =60
3	Sulphur Dioxides (SO ₂)	IS: 5182 (Part-2): 2001 Reaffirmed: 2017	µg/m ³	13.20	5.0 - 1050	For 24 hour =80
4	Oxides of nitrogen (NO _x)	IS: 5182 (Part-6): 2006 Reaffirmed: 2017	µg/m ³	18.76	6.0 - 750	For 24 hour =80

3.1.7 Ambient Air Quality Monitoring Results at Village: Mahsona

The detailed on-site monitoring results of PM_{2.5}, PM₁₀, SO₂ and NO_x are presented in **Table - 3.7.**

Table - 3.7: Ambient Air Quality Monitoring Results at Village: Mahsona

Sr. No	Particulars	Protocol	Unit	Result	Range of testing /limit of detection	Standard as per NAAQS; dated 18/11/ 2009
1	Particulate matters size less than 10 µm (PM ₁₀)	IS: 5182 (Part-23): 2006 Reaffirmed: 2017	µg/m ³	78.6	5.0 - 1200	For 24 hour =100
2	Particulate matters size less than 2.5 µm (PM _{2.5})	IS: 5182 (Part-24): 2019	µg/m ³	47.71	2.0 - 500	For 24 hour =60
3	Sulphur Dioxides (SO ₂)	IS: 5182 (Part-2): 2001 Reaffirmed: 2017	µg/m ³	13.24	5.0 - 1050	For 24 hour =80
4	Oxides of nitrogen (NO _x)	IS: 5182 (Part-6): 2006 Reaffirmed: 2017	µg/m ³	18.42	6.0 - 750	For 24 hour =80

3.1.8 Discussion on Ambient Air Quality in the Study Area

The value of PM₁₀ at Ambient Air Monitoring Station No: 1, 2, 3, 4 & 5 are 89.6 µg/m³, 84.2 µg/m³, 77.3 µg/m³, 76.8 µg/m³ & 78.6 µg/m³ respectively which were within permissible limit of 100 µg/m³ and PM_{2.5} levels are 53.55 µg/m³ Near Main Gate of Premises, 52.36 µg/m³ Near Project Area, 48.28 µg/m³ at Village Muradnagar, 46.61 µg/m³ at Village: Bakhsh Khera and 47.71 µg/m³ at Village: Mahsona, were also observed within permissible limit of 60 µg/m³ (for residential, rural and other areas as stipulated in the National Ambient Air Quality Standards). SO₂ ranges between 12.66 µg/m³ to 15.46 µg/m³ and NO_x ranges between 17.32 µg/m³ to 22.04 µg/m³ was also observed within the corresponding stipulated limits (Limit for SO₂ and NO_x; 80 µg/m³) at all of the 05 monitoring locations. Station wise variation of ambient air quality parameters has been graphically shown in **Figure - 3.1 to 3.4.**

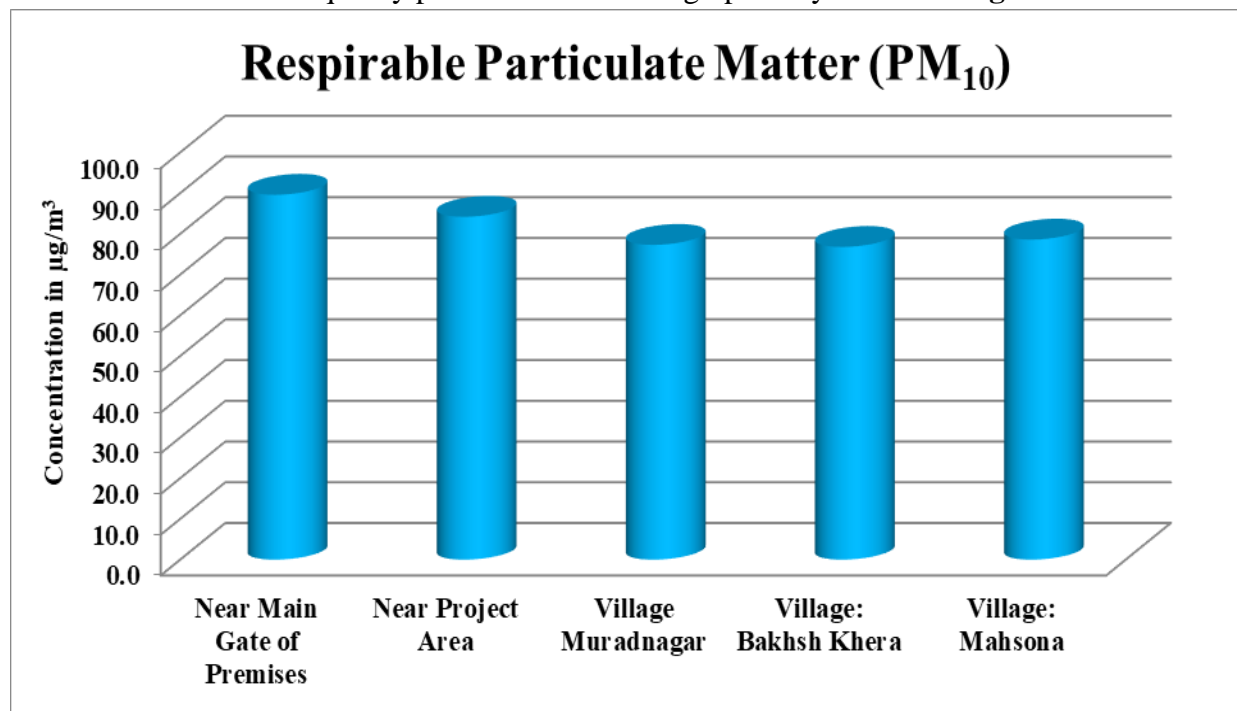


Figure - 3.1: Graphs Showing PM₁₀ Concentration at all sites

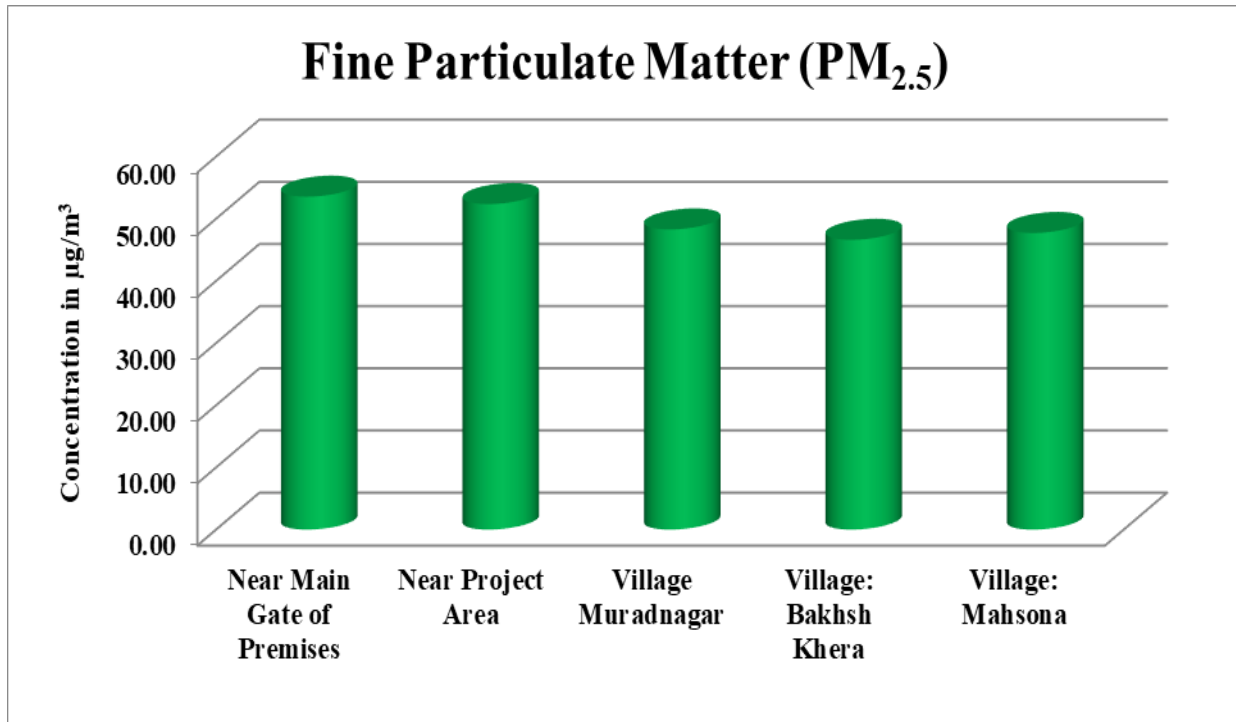


Figure - 3.2: Graphs Showing PM_{2.5} Concentration at all sites

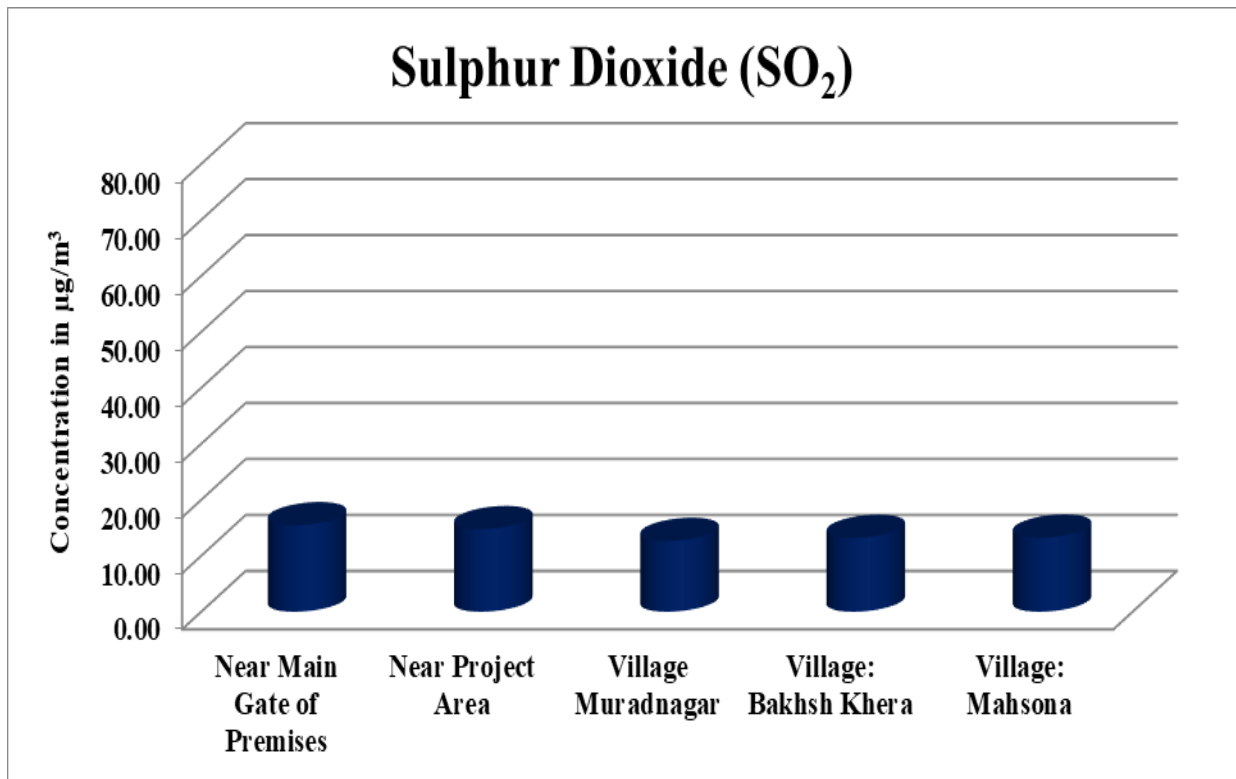


Figure - 3.3: Graphs Showing SO₂ Concentration at all sites

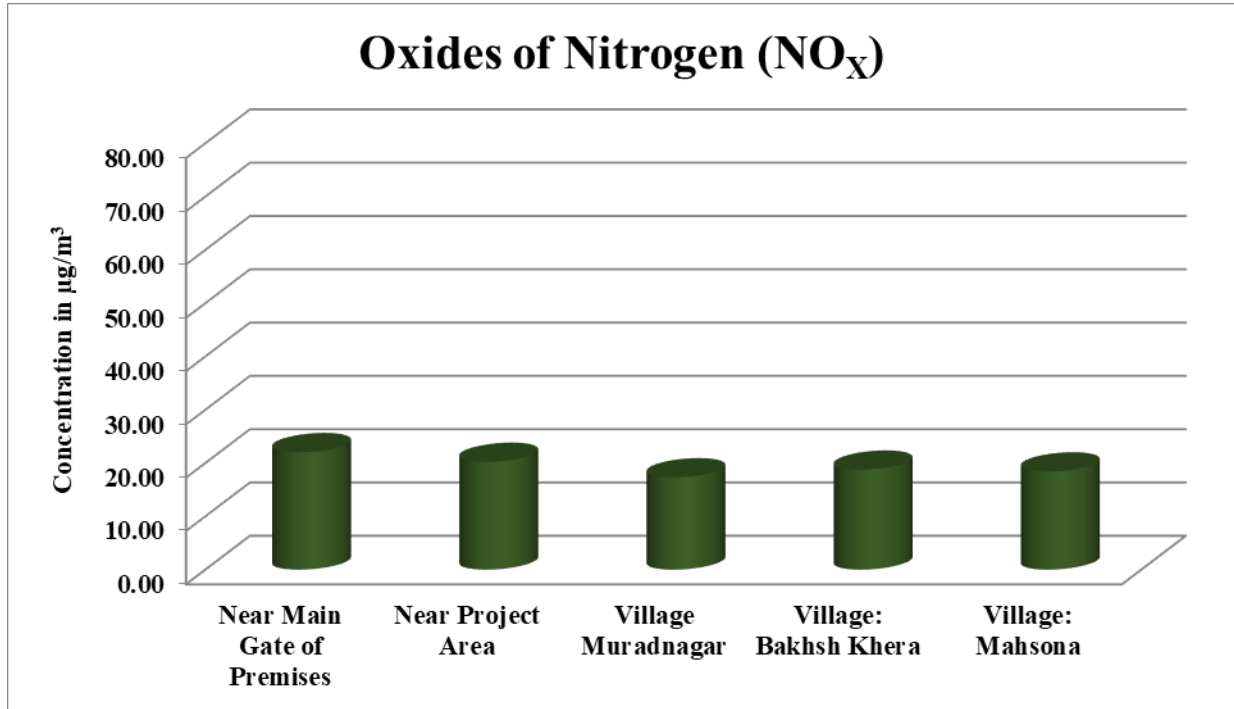


Figure - 3.4: Graphs Showing NO_x Concentration at all sites

3.2 STACK EMISSION MONITORING

Stack Emission monitoring was carried out by EPA approved Laboratory on date 11.09.2024 for the installed 18.0 TPH boiler (attached with Electro Static Precipitator as air pollution control device with a stack height of 42.0 meter).

3.2.1 Stack Emission Monitoring Methodology

Monitoring was conducted in respect of the following parameters:

- Particulate Matter (PM)

The Method used for Stack Emission monitoring and range of testing with CPCB standard are given in **Table - 3.8**

Table - 3.8: Details of Stack Emission Monitoring Results

Sr. No.	Parameter	Unit	Protocol	Result	Range of Testing/ Limit of Detection	Standard (as per CPCB)
1	Particulate Matter	mg/Nm ³	IS: 11255 (Part-1): 1985 Reaffirmed: 2019	46.08	2.0 - 1000	150

3.3 AMBIENT NOISE MONITORING

3.3.1 Ambient Noise Monitoring Locations

The main objective of noise monitoring in the study area is to assess the present ambient noise levels near project site due to various industrial activities and increased vehicular movement. A preliminary reconnaissance survey has been undertaken to identify the major noise generating sources in the area. Ambient noise monitoring was conducted at 01 location as given in **Table - 3.9**.

Table - 3.9: Details of Ambient Noise Monitoring Stations

Sr. No	Location Code	Location name and description	Date of Monitoring
1.	NQ - 1	Near Project Premises	12/09/2024 (06:00 AM) to 13/09/2024 (06:00 AM)

3.3.2 Methodology of Noise Monitoring

Noise levels were measured using sound level meter. Noise level monitoring was carried out continuously for 24-hours with one hour interval starting at 06:00 hrs to 06:00 hrs next day. The noise levels were monitored on working days only. During each hour Leq were directly computed by the instrument based on the sound pressure levels. Monitoring was carried out at 'A' response.

3.3.3 Ambient Noise Monitoring Results

The location wise ambient noise monitoring results is summarized in **Table - 3.10**. The noise levels are graphically presented in **Figure - 3.5**.

Table - 3.10: Ambient Noise Monitoring Results

Ambient Noise Level				
Sr. No.	Parameter	Unit	Results Day Time (06:00 AM - 10:00 PM)	Results Night Time (10:00 PM - 06:00 AM)
1	Equivalent sound level	dB(A)	62.25	49.26

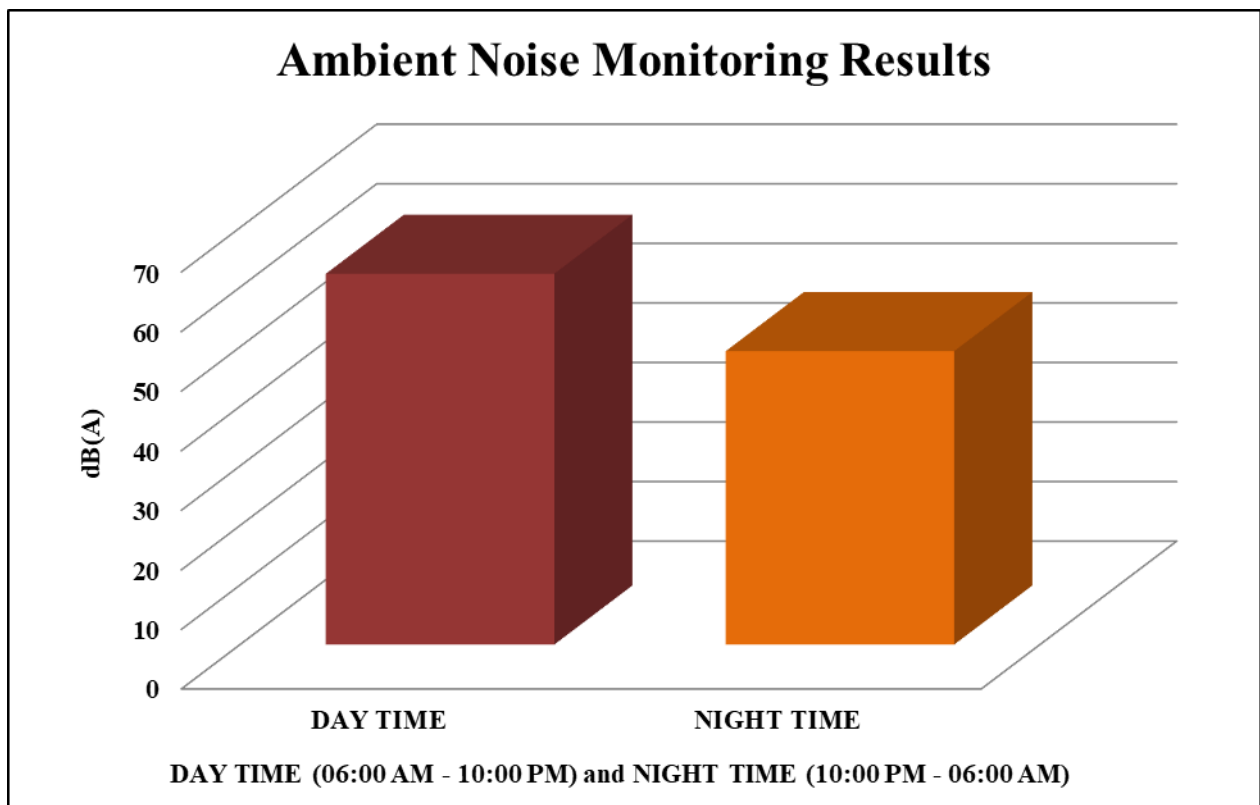


Figure - 3.5: Day and Night Time noise Level Near Project Premises

Table - 3.11: Noise Standards as per CPCB Schedule rule 3(1) and 4(1)

Noise Standards as per CPCB Schedule rule 3(1) and 4(1)			
Area Code	Category of Area/Zone	Limits in dB(A) Leq	
		Day Time	Night Time
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40

3.3.4 Discussion on Ambient Noise Levels in the Study Area

Day Time Noise Levels (L_{day}):

The day time noise level at monitoring station was found 62.25 dB(A), which is within limits prescribed for industrial area i.e. 75 db (A).

Night Time Noise Levels (L_{night}):

The night time noise level at monitoring station was found 49.26 dB(A), which is within limit prescribed for industrial area i.e. 70 dB (A).

3.4 GROUND WATER QUALITY MONITORING

3.4.1 Ground water Quality Monitoring Locations

Keeping in view the importance of ground water, sample of ground water was collected from the project site for the assessment of impacts of the project on the groundwater quality.

Water sample was collected from the project site. The sample was analyzed for various parameters to compare with the standards for Ground water as per IS: 10500 for Groundwater sources. The details of water sampling locations are given in **Table - 3.12**.

Table - 3.12: Details of Water Quality Monitoring Station

Sr. No	Location Code	Location name and description	Date of Monitoring
1.	GW - 1	Borewell	11 th April, 2024
2.	GW - 1	Borewell	09 st May, 2024
3.	GW - 1	Borewell	07 st June, 2024
4.	GW - 1	Borewell	12 th July, 2024
5.	GW - 1	Borewell	16 st August, 2024
6.	GW - 1	Borewell	13 th September, 2024

3.4.2 Methodology of ground water Quality Monitoring

Sampling of ground water was carried out on 11.04.2024, 09.05.2024, 07.06.2024, 12.07.2024, 16.08.2024 and 13.09.2024. Samples were collected as grab sample and sampling forms are filled in as per the sampling plan. The preservative sample were properly added to preserve as per Standard Operating Procedures (SOPs) and stored immediately in ice boxes, which were ensured for appropriate temperatures. **Sample for chemical analysis was collected in polyethylene carboys. Sample collected for metal content were acidified to <2 pH with 1 ml HNO₃. A sample for bacteriological analysis was collected in sterilized glass bottles.**

Soon after the completion of sampling, chain of custody sheets for the samples are filled in and then they were transported by road to Environmental & Technical Research Centre, Lucknow for further analysis. Proper care was taken during packing and transportation of samples. All the samples reached the central laboratory within the holding times for different parameters. After ensuring the same the samples were forwarded immediately for analysis. The samples were analyzed as per the standard procedures specified in 'Standard Methods for the Examination of Water and Wastewater' published by American Public Health Association (APHA) and CPCB. The analytical techniques and the test methods adopted for testing of ground water are given in **Table - 3.13 to Table - 3.18.**

3.4.3 Ground water Quality Monitoring Results

The detailed Ground water quality monitoring results are presented in **Table - 3.13 to Table - 3.18.**

**Table - 3.13: Ground water Quality Results of Borewell
(April 2024)**

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
Physico-chemical Parameters							
1	Colour	Hazen	IS: 3025 (Part-04): 2021	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-05): 2018	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 24 th Ed. 2023 - 4500 H ⁺	7.4	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24 th Ed. 2023 - 2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	406.0	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th Ed. 2023 - 5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	56.0	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24 th Ed. 2023 - 3500 Mg, B	33.048	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-Cl B	26.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F C	0.29	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	mg/l	APHA 24 th Ed. 2023 - 5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ²⁻	28.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	312.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	276.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.12	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.03	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.39	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 24 th Ed. 2023 - 3112 B	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 2	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
Microbiological Parameters							
30	<i>E. coli</i>	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	
31	<i>T. coli</i>	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	

**Table - 3.14: Ground water Quality Results of Borewell
(May, 2024)**

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
Physico-chemical Parameters							
1	Colour	Hazen	IS: 3025 (Part-04): 2021	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-05): 2018	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 24 th Ed. 2023 - 4500 H ⁺	7.6	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 23 rd Ed. 2017-2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	386.0	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th Ed. 2023 - 5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	59.2	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24 th Ed. 2023 - 3500 Mg, B	29.16	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-Cl B	20.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F C	0.42	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	mg/l	APHA 24 th Ed. 2023 - 5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ²⁻	30.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	296.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	268.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.09	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.04	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.52	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 24 th Ed. 2023 - 3112 B	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 2	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
Microbiological Parameters							
30	E. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	

**Table - 3.15: Ground water Quality Results of Borewell
(June, 2023)**

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
Physico-chemical Parameters							
1	Colour	Hazen	IS: 3025 (Part-04): 2021	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-05): 2018	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 24 th Ed. 2023 - 4500 H ⁺	7.4	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 23 rd Ed. 2017-2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	382.0	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th Ed. 2023 - 5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	57.6	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24 th Ed. 2023 - 3500 Mg, B	26.24	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-Cl ⁻ B	24.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F ⁻ C	0.33	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	mg/l	APHA 24 th Ed. 2023 - 5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ²⁻	26.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	284.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	252.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.14	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.05	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.19	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 24 th Ed. 2023 - 3112 B	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 2	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
Microbiological Parameters							
30	E. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	

**Table - 3.16: Ground water Quality Results of Borewell
(July 2024)**

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
Physico-chemical Parameters							
1	Colour	Hazen	IS: 3025 (Part-04): 2021	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-05): 2018	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 24 th Ed. 2023 - 4500 H ⁺	7.5	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 23 rd Ed. 2017-2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	368.8	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th Ed. 2023 - 5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	52.8	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24 th Ed. 2023 - 3500 Mg, B	28.18	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-Cl ⁻ B	30.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F ⁻ C	0.38	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	mg/l	APHA 24 th Ed. 2023 - 5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ²⁻	32.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	280.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	248.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.10	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.08	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.25	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 24 th Ed. 2023 - 3112 B	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 2	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
Microbiological Parameters							
30	E. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	

**Table - 3.17: Ground water Quality Results of Borewell
(August 2024)**

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
Physico-chemical Parameters							
1	Colour	Hazen	IS: 3025 (Part-04): 2021	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-05): 2018	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 24 th Ed. 2023 - 4500 H ⁺	7.4	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 23 rd Ed. 2017-2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	390.6	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th Ed. 2023 - 5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	54.4	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24 th Ed. 2023 - 3500 Mg, B	32.076	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-Cl ⁻ B	28.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F ⁻ C	0.29	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	mg/l	APHA 24 th Ed. 2023 - 5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ²⁻	28.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	292.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	268.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.12	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.03	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.43	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 24 th Ed. 2023 - 3112 B	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 2	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
Microbiological Parameters							
30	E. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	

**Table - 3.18: Ground water Quality Results of Borewell
(September, 2024)**

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
Physico-chemical Parameters							
1	Colour	Hazen	IS: 3025 (Part-04): 2021	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-05): 2018	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 24 th Ed. 2023 - 4500 H ⁺	7.3	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 23 rd Ed. 2017-2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part-16): 2023	396.4	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th Ed. 2023 - 5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	54.4	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24 th Ed. 2023 - 3500 Mg, B	26.24	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-Cl B	24.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F C	0.30	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part-26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	mg/l	APHA 24 th Ed. 2023 - 5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ²⁻	24.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	284.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	244.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.09	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.04	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.55	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 24 th Ed. 2023 - 3112 B	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 2	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
Microbiological Parameters							
30	E. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	

3.5 SOIL MONITORING

3.5.1 Soil Monitoring Locations

The objective of the soil monitoring is to identify the impacts of ongoing construction activities on soil quality and also predict impacts, which have arisen due to execution of Industrial allied activities. Accordingly, a study of assessment of the soil quality has been carried out.

To assess impacts of ongoing construction activities on the soil in the area, the Physico-chemical characteristics of soils were examined by obtaining soil samples from selected points and analysis of the same. Single sample of soil was collected from the project site for studying soil characteristics, the location of which is listed in **Table - 3.19**.

Table - 3.19: Details of Soil Monitoring Station

Sr. No	Location Code	Location name and description
1.	SQ - 1	Near Plant Area

3.5.2 Methodology of Soil Monitoring

The sampling has been done in line with IS: 2720 & Methods of Soil Analysis, Part-1st, 2nd Edition, 1986 of American Society for Agronomy and Soil Science Society of America. The homogenized samples were analyzed for physical and chemical characteristics (physical, chemical and heavy metal concentrations). The soil samples were collected in the month of September on 13.09.2024.

The samples have been analyzed as per the established scientific methods for Physico-chemical parameters. The heavy metals have been analyzed by using Atomic Absorption Spectro-photometer.

3.5.3 Soil Monitoring Results

Single sample of soil is collected from the site to check the quality of soil of the study area. The Physico-chemical characteristics of the soil, as obtained from the analysis of the soil sample, are presented in **Table - 3.20**.

Table - 3.20: Physico-Chemical Characteristics of Soil Near Plant Area

Sr. No.	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection
1	pH	-	IS: 2720 (Part-26): 1987 Reaffirmed: 2016	7.3	1 - 14
2	Electrical Conductivity	µmhos/cm	IS: 14767:2000 Reaffirmed: 2021	298.0	1.0 - 40000
3	Moisture content	%	IS: 2720 (Part-02): 1973 Reaffirmed: 202	3.08	1.0 - 50
4	Sulphur	Kg/Hec	IS:14685: 1999 Reaffirmed: 2019	12.25	5.0 - 100
5	Boron	mg/kg	Method Manual of Soil Testing in India	2.02	1.0 - 100
6	Copper	mg/kg	Method Manual of Soil Testing in India	0.36	0.3 - 500
7	Zinc	mg/kg	Method Manual of Soil Testing in India	11.46	1.0 - 500
8	Iron	mg/kg	Method Manual of Soil Testing in India	119.8	5.0 - 500
9	Manganese	mg/kg	Method Manual of Soil Testing in India	9.16	5.0 - 500

3.5.4 Discussion on Soil Characteristics in the Study Area

The soil in study area is characterized by moderate organic content. The soil quality in the project area has not been affected by the project activities.



UTTAR PRADESH POLLUTION CONTROL BOARD
Building. No TC-12V Vibhuti Khand, Gomti Nagar, Lucknow-226010

Phone:0522-2720828,2720831, Fax:0522-2720764, Email: info@uppcb.com, Website: www.uppcb.com

Certificate No. -
154037/UPPCB/Unnao(UPPCBRO)/CTE/HARDOI/2022

Dated:- 25/04/2022

To ,

Shri JAVED MAHMOOD KHAN

M/s SHRI GANG INDUSTRIES AND ALLIED PRODUCTS LIMITED

Plot no - B 2/6 B, 2/7, UPSIDC Industrial Area, Sandila Phase IV, Lucknow Hardoi Road,

Tehsil Sandila, District Hardoi (Uttar Pradesh),HARDOI,241204

HARDOI

Sub : “Consent to Establish” under the provisions of Water (Prevention and Control of Pollution) Act, 1974 as amended and Air (Prevention and Control of Pollution) Act, 1981 as amended.

Sir.

Kindly refer to the Consent to Establish application dated 01/04/2022 submitted for setting up of new molasses/non-molasses based distillery for the production of Rectified Spirit/Extra Neutral Alcohol/Absolute Alcohol/Ethanol. The unit has been issued Environmental Clearance by Ministry of Environment, Forest & Climate Change, Government of India/State Level Environment Impact Assessment Authority, UP under the provisions of EIA Notification S.O. 1533(E) dated 14.09.2006 as amended.

Unit proposes to install Zero Liquid Discharge System as per the directives of Central Pollution Control Board.

The “Consent to Establish” under the provisions of Water (Prevention and Control of Pollution) Act, 1974 as amended and Air (Prevention and Control of Pollution) Act, 1981 as amended is hereby issued for setting up of new molasses/non-molasses based distillery for the production of Rectified Spirit/Extra Neutral Alcohol/Absolute Alcohol/Ethanol for enlisted production capacity, raw material, manufacturing process, zero liquid discharge based effluent treatment system and emission control systems strictly as per the conditions of Environmental Clearance. The Consent to Establish shall be subject to following conditions:

1. Unit shall ensure compliance of the conditions imposed in Environmental Clearance issued by Ministry of Environment, Forest & Climate Change, Government of India/State Level Environment Impact Assessment Authority, UP.
2. The Distillery unit shall implement the project as per the proposal submitted and ensure strict compliance of zero liquid discharge system and no effluent shall be discharged outside the premises into any river/stream /surface water/land.
3. Unit shall operate 360 days per year for Incineration Boiler/Covered Bio-compost based zero liquid discharge system and for 270 days per year for uncovered Bio-compost based zero liquid discharge system.
4. The maximum permissible storage capacity for concentrated spent wash shall be 07 days equivalent to spent wash generation in case of Incineration Boiler based zero liquid discharge system and shall be 30 days equivalent to spent wash generation in case of Bio-composting based zero liquid discharge system.
5. Other process effluent streams shall be treated through Condensate Polishing effluent treatment unit and treated effluent shall be recycled and utilized in the process for irrigation as per the CPCB guidelines dated 04-10-2019 for utilization of treated effluent in irrigation to achieve zero liquid discharge.
6. Unit shall install effective Air Pollution Control System and adequate stack height from ground level as per the provisions of Environment (Protection) Rules, 1986 in order to ensure that the stack emissions conform to the prescribed norms.

7. Unit shall abstract ground water only with valid permission of Uttar Pradesh Ground Water Department under the provisions of Uttar Pradesh Ground Water (Management & Regulation) Act, 2019 as amended and ensure compliance of its conditions.
8. Installation and implementation of Online Continuous Monitoring System (OCMS) with at least 95% uptime, connected to the servers of the Central Pollution Control Board and State Pollution Control Board to report the real time quantity and quality of emission and discharges.
9. In case of Bio-composting based Zero Liquid Discharge System, the operation of Bio-composting shall be strictly in accordance with the Standard Operating Procedure of Central Pollution Control Board.
10. Unit shall obtain Consent to Operate from UPPCB under Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981 prior to the commencement of production.
11. The validity of Consent to Establish shall be 05 (Five) years from the date of issue.
12. The industry shall ensure to install the roof top Rain Water Harvesting (RWH) system and piezometer within the premises.
13. The industry shall comply with the provisions of Environment (Protection) Amendment, Rules 2018 notified by MoEF& CC by notification no. 49 Dt. 25-01-2018, Environment (Protection) Act 1986, Water (Prevent and Control of Pollution), 1974 , Air (Prevent and Control of Pollution), 1981 as amended, Plastic Waste Management Rules, 2016 & Hazardous and Other Waste (Management and Transboundary Movement), Rules 2016 (Whichever is applicable).
14. The unit shall comply with the charter of CPCB prepared for the distillery units.
15. Unit shall deposit bank guarantee of Rs. 10 Lacs only for the compliance of above conditions within 15 days from issuance of this certificate.

Chief Environmental Officer

**Copy
to:**

1. Director, Impact Assessment Division, Ministry of Environment, Forest & Climate Change, Government of India, New Delhi-110003.
2. Member Secretary, State Level Environment Impact Assessment Authority, UP
3. Excise Commissioner, Government of Uttar Pradesh, Lucknow
4. Regional Officer, UPPCB Unnao

Chief Environmental Officer



Uttar Pradesh Pollution Control Board

Building. No TC-12V Vibhuti Khand, Gomti Nagar, Lucknow-226010

Phone:0522-2720828,2720831, Fax:0522-2720764, Email: info@uppcb.in, Website: www.uppcb.com

159599/UPPCB/Unnao(UPPCBRO)/CTO/both/HARDOI/2023

Date: 23/12/2023

To,

M/s

SHRI GANG INDUSTRIES AND ALLIED PRODUCTS LIMITED

Plot no - B 2/6 B, 2/7, UPSIDC Industrial Area, Sandila Phase IV,
Lucknow Hardoi Road, Tehsil Sandila, District Hardoi (Uttar
Pradesh),HARDOI,241204

Application Id-
16935610

Consolidated Consent to Operate and Authorisation hereinafter referred to as the CCA (Consolidated Consent & authorization) (Fresh) under Section-25 of the Water (Prevention & Control of Pollution) Act, 1974 and under Section-21 of the Air (Prevention & Control of Pollution) Act, 1981

CCA is hereby granted to **SHRI GANG INDUSTRIES AND ALLIED PRODUCTS LIMITED** located at **Plot no - B 2/6 B, 2/7, UPSIDC Industrial Area, Sandila Phase IV, Lucknow Hardoi Road, Tehsil Sandila, District Hardoi (Uttar Pradesh),HARDOI,241204.** subject to the provisions of **the Water Act, Air Act** and the orders that may be made further and subject to following terms and conditions :-

1. This CCA **SHRI GANG INDUSTRIES AND ALLIED PRODUCTS LIMITED** granted for the period from **01/01/2024 to 31/12/2028** and valid for manufacturing of following products.

S No	Product	Quantity	Unit
1	Extra Neutral Alcohol (ENA)/Rectified Spirit (RS)	55	Kilo Liters/Day
2	Co-power generation plant	2.0	Megawatt

2. **Conditions under Water(Prevention and Control of Pollution) Act -1974 as amended :-**

(i) The daily quantity of effluent discharge (KLD) :-

Kind of Effluent	Quantity(KLD)	Treatment facility	Discharge point
Domestic	6.0 KLD	Septic Tank	Horticulture
Industrial	Zero Liquid Discharged	Septic Tank	ZLD

(ii) Trade Effluent Treatment and Disposal :-The applicant shall operate Effluent Treatment Plant consisting of primary/secondary and tertiary treatment as is required with reference to influent quantity and quality.

In case of stoppage of functioning of ETP, production has to be stopped immediately and this Board has to be intimated by fax/phone/email with a report in this regard to be dispatched immediately.

(iii) The treated effluent shall be recycled to the maximum extent and should be reused within the premises for gardening etc. Quality of the treated effluent shall meet to the following general and specific standards as prescribed under Environment (Protection) Rules, 1986 and applicable to the unit from time-to-time :-

Industrial Effluent Quality Standard

S.No.	Parameter	Standard
1	Zero Liquid Discharge	ZLD

(iv) Sewage Treatment and Disposal :- The applicant shall provide comprehensive STP as is required with reference to influent quantity and quality. In case of stoppage of functioning of STP, production has to be stopped immediately and this Board has to be intimated by fax/phone/email with a report in this regard to be dispatched immediately.

(v) The treated sewage shall be reused in gardening as far as possible. The STP shall be maintained continuously so as to achieve the quality of the treated sewage to the following standards.

S No.	Parameters	Standards
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3. Conditions under Air (Prevention and Control of Pollution) Act -1981 as amended :-

i) The applicant shall use following fuel and install a comprehensive control system consisting of control equipment as required with reference to generation of emissions and operate and maintain the same continuously so as to achieve the level of pollutants to the following standards.

Air Pollution Source Details

S No.	Air Pollution Source	Type of fuel	Stack no	Control Device	Height of Stack
1	01 nos. Boiler (capacities of 18.0 TPH) with ESP	Rick Husk/Biomass	1	Particulate Matter	38 meter from GL
2	750 KVA DG set	Diesel	1	Particulate Matter	as per norms
3	500 KVA DG set	Diesel	1	Particulate Matter	as per norms

Emission Quality Standards

S No.	Stack no	Parameters	Standards
1	1	Particulate Matter	150 mg/Nm ³

In case of stoppage of functioning of air pollution control equipment, production has to be stopped immediately and this Board has to be intimated by fax/phone/email with a report in this regard to be dispatched immediately

(ii) The unit will not use any type of restricted fuel.

iii) Noise from the D.G. Set and other source(s) should be controlled by providing an acoustic enclosure as is required for meeting the ambient noise standards for night and day time as prescribed for respective areas/zones (Industrial, Commercial, Residential, Silence) which are as follows :-

Day time : from 6.00 a.m. to 10.00 p.m., Night time: from 10.00 p.m. to 6.00 a.m.

Standards for Noise level in db(A) Leq	Industrial Area	Commercial Area	Residential Area	Silence Zone
--	-----------------	-----------------	------------------	--------------

	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
	75	70	65	55	55	45	50	40

4. Essential documents to be submitted by the Industry/Unit as Applicable :-

- (i) Environment Statement in Form-V of Environment (Protection) Rules, 1986.
 - (ii) Quarterly compliance report of the CCA, photograph of ETP/APCs/Waste Storage Area.
5. Competent Authority reserves the right to change/modify/add any time any condition of this CCA.
6. Unit has to comply with the following specific & general conditions. Non compliance of any provision of this CCA and provisions of the Water Act, Air Act and Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 will result in legal action under the aforesaid Acts and Rules.
7. In compliance to the G.O 1011/81-7-2021-09 (Writ)/2016 dated.13.10.2021 issued by Department of Environment, Forest and Climate Change, Uttar Pradesh. You are directed to develop Miyawaki Forest as per the SOP available at URL:-<http://www.upecp.in/TrainingSession.aspx> for ensuring timely compliance of this direction, you are hereby directed to submit a bank guarantee with minimum validity of one year of the amount equivalent to the sum of initial consent fees (Air and Water) or Rs. 50,000/- (Rs. Fifty Thousand Only) whichever is more, within 30 days from the date of issuance of this certificate. In case of non-compliance of this direction, your consent will be revoked by the Board.
8. If the unit uses the ground water and requires the permission from SGWA/CGWA for water abstraction then the industry will have to obtain No objection certificate for abstraction of ground water. It will be the responsibility of the industry to comply with the various conditions of the NOC obtained from the competent authority and submit to the Board, within 3 months time failing which CTO will be revoked.

General Conditions:-

1. The applicant shall get analysed the samples of effluent/emission/hazardous wastes at least once in a three month from the laboratory recognized by the MoEF and shall report to the UPPCB.
2. The applicant shall however, not without the prior consent of the Board bring into use any new or altered outlet for the discharge of effluent or gases emission or sewage waste from the unit.
3. Treated Industrial waste water and domestic waste water shall be disposed jointly at one disposal point. The applicant shall provide discharge measurement equipment at final disposal point.
4. The applicant shall strictly comply with conditions of this CCA and submit compliance report of stipulated conditions within 30 days of receipt of this CCA. If at any point of time, it is found that the industry is not complying with stipulated conditions or any further direction/instruction issued by the Board, legal action shall be initiated against the applicant.
5. The applicant shall maintain good house keeping. All valves/pipes/sewer/drains etc. must be leak-proof
6. The industry shall provide uninterrupted entry to the STP/ETP inlet and outlet points, Air Pollution Control equipment and stack for smooth sampling/monitoring of efficiency of pollution control systems.
7. The industry shall provide Inspection Book at the time of inspection to the Board's officials.
8. Whenever due to any accident or other unforeseen act or event, such emission occurs or is apprehended to occur in excess of standards laid down, such information shall be reported to the Board's offices and all other concerned offices. In case of failure of pollution control equipment, the production process connected to it shall be stopped with immediate effect.
9. The industry shall operate in a manner so that all emissions be emitted through designated chimney/stack only.
10. In case of any damage to the agriculture productivity, human habitation etc. by the operation of industry, it shall be imperative to stop production in the industry with immediate effect and such information shall be reported to Board's offices. The industry shall be liable to pay compensation also in such cases as decided by the Competent Authority.

11. The applicant shall apply before the 60 days of expiry of CCA or any change in production types/ production capacity/manufacturing process/capacity enhancement etc. or any change in effluent discharge point or emission point
12. The Board reserves the right to revoke/add/modify any stipulated condition issued along with CCA, as may be necessary.

Specific Conditions:-

1. This consent is valid for the production of Extra Neutral Alcohol (ENA)/Rectified Spirit (RS)-55.0 KLD by using 135 Ton/day Grain as main raw material and also 2.0 MW co-power generation power. In compliance of the CPCB guidelines the unit is allowed to operate 365 days per annum.
2. The industry shall use Grain as raw material for manufacturing of Extra Neutral Alcohol (ENA)/Rectified Spirit (RS). This consent is valid for the current products and capacity. In Case of any change in process, capacity enhancement etc. consent to establish (CTE) Certificate shall be obtained from the Board.
3. The industry shall ensure to use solid waste from the grain based operations generally comprises of fibers and proteins in the form of DDGS (30 TPD), which shall be ideally used as cattle feed.
4. The industry shall ensure to operate and maintain the MEE and CPU to ensure Zero Liquid Discharge; failing which, this consent order shall be treated as cancelled.
5. Industry shall comply all other directions issued under the Water (Prevention and Control of Pollution) Act, 1974 stipulated by Central Pollution Control Board, New Delhi to ensure achievement of Zero Liquid Discharge (ZLD) positively.
6. The separated water from solid separation system such as condensate from evaporation concentration system such as MEE shall be reutilized in the process. If required, separated water and condensate may be treated before reutilization.
7. The storage facility provided for spent wash shall be properly lined and made impermeable and the storage capacity at any stage shall not exceed 07 days equivalent of production.
8. Domestic effluent shall be treated in soak pit/septic tank.
9. Industry shall operate and maintain measuring devices (water / flow meters) at required location (raw water consumption, solid separation system: feed, permeate and reject, evaporation concentration systems: feed concentrate and condensate, water reused in the process & concentrate utilized in drying system/equivalent technology) to record the water balance shortly without delay.
10. The industry shall ensure to comply the all condition mentioned in NOC issued by UP Ground Water Department.
11. Industry shall display the water balance and quantities of concentrated spent wash disposed in (drying system / equivalent technology) and report the reduction in raw water consumption as a result of adopting these systems.
12. Industry shall ensure to install web cameras at each strategic location such as MEE, CPU and lagoon for monitoring purpose. Industry shall operate and maintain installed web cameras at each strategic location

spent wash storage lagoon and MEE and CPU etc. for monitoring purpose.

13. Industry shall operate and maintain the effluent treatment system (MEE and CPU) effectively and regularly. All the effluent treatment system shall be kept in good running condition all the time and failure (if any), shall be immediately rectified without delay otherwise, similar alternate arrangement shall be made. In the event of any failure of any pollution control system adopted by the industry, the respective production unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Industry shall not discharge any treated / untreated effluent in to the river or any surface water bodies. No effluent shall be discharged outside of the factory premises in any circumstances; hence zero discharge condition shall be maintained at all the time.

14. Industry shall provide adequate arrangement for control of odour nuisance. All internal roads shall be made pucca. Industry shall maintain good housekeeping within factory premises, around effluent treatment facilities etc.

15. The industry shall ensure to establish Miyawaki forest, as per the GO no. 1011/81-7-2021-09(rit)/2016 dated 13.10.2021 of Deptt. of Environment, forest and Climate Change.

16. Industry shall submit Environment Statement to this Board as per provision of Environment (Protection) amendment Rule, 1993 for the previous year ending 31st March on or before 30th September every year.

17. Industry shall make proper arrangement for safe and scientific handling, storage, transportation and disposal of all solid wastes, sludge etc. generated.

18. Spent wash generation, storage shall be done as per the guidelines of CPCB. Measuring system for spent wash storage shall be installed.

19. The industry shall submit ground water quality analysis report of the nearby areas on quarterly basis in coordination with UPPCB.

20. The unit shall submit the latest copy of Audited Balance Sheet/C.A. Certificate (Fixed Assets+ Current Assets - Current Liabilities) so that the Consent fee payable by the industry may be verified.

21. The Order issued by Hon'ble Courts/Hon'ble NGT, MoEF & CC, Central Pollution Control Board, U.P. Pollution Control Board, shall be complied with.

22. The industry shall provide copy of records of alcohol/rectified spirit production, spent wash generation details of MEE operations, mass flow meter reading connected with CPCB server etc. on monthly basis (by 10th of every month) to CPCB/UPPCB.

23. The industry will strictly comply with the provisions of Hazardous and other waste (Management & Transboundary Movement) Rules, 2016 will be complied. Generated hazardous waste will be disposed through authorized TSDF and record will be sent to this office in Form-10.

24. Analysis report from recognized laboratory for Solid concentration at inlet and outlet of MEE should be submitted to the Board within one month from the date of issue of this certificate.

25. The industry shall operate and maintain properly the 18 TPH Boiler and ESP.

26. Online Emission Monitoring System shall be installed at the 18 TPH boiler stack and connected to CPCB

and UPPCB server.

27. The industry shall operate and maintain the Air Pollution Control System efficiently and continuously so as to satisfy the prescribed emission standards.

28. The industry shall adhere to the ambient Air quality prescribed standards at all the time.

29. The total ash generated shall be disposed in such a way that it should not affect the soil and the surrounding environment.

30. The industry shall ensure to comply with the provisions of the charter issued by CPCB on corporate responsibility for Environmental Protection.

31. The industry shall ensure to submit the stack monitoring report from accredited NABL laboratory for start the process.

32. Noise and emission level from the installed the DG sets of 500 KVA and 750 KVA capacity shall be within the prescribed norms.

33. Proposal for 100 % utilization of Fly ash shall be submitted by the unit within 03 months from the date of clearance of this certificate.

34. The industry shall comply with the provisions of, Environment (Protection) Act 1986, Water (Prevention and Control of Pollution) Act, 1974 as amended, Air (Prevention and Control of Pollution) Act, 1981 as amended, Plastic Waste Management Rules 2016, E- Waste (Management) Rules 2016, Solid Waste Management Rules 2016 & Hazardous and other Waste (Management and Transboundary Movement) Rules 2016 (Whichever is applicable).

35. If closure order is issued by CPCB or UPPCB against this defaulting unit, then CTO issued earlier will remain suspended during the closure period and after ensuring the compliance and after revocation of closure order, the CTO will automatically be effective from the date of issuance of closure order revocation, with additional conditions mentioned in the closure revocation order.

**Chief Environmental Officer,
Circle-5, UPPCB.**

Copy to:

Regional Officer, UPPCB, Unnao.

**Chief Environmental Officer,
Circle-5, UPPCB.**



मिशन LIFE - पर्यावरण के लिए जीवन शैली (Lifestyle For Environment) जनसहभागिता का सन्देश



- स्वच्छता – देशसेवा में अपने परिवेश की स्वच्छता हेतु अपना सक्रिय योगदान सुनिश्चित करें
- संकल्प लें -एकल उपयोग प्लास्टिक उत्पाद जैसे कप, तश्तरी, चम्मच, स्ट्रॉ, ईयरबड्स आदि का उपयोग न हो एवं पर्यावरण अनुकूल विकल्पों जैसे कागज/पत्तों से बने दोने या कटलरी को प्राथमिकता दी जाय |
- एकल उपयोग प्लास्टिक उत्पाद के प्रयोग को रोकने एवं प्लास्टिक बैग के बजाय कपड़े के थैले का उपयोग करने मात्र से 375 मिलियन टन ठोस (प्लास्टिक) कचरे का उत्सर्जन बचाया जा सकता है
- चक्रीय अर्थव्यवस्था (सर्कुलर इकोनॉमी) का समुचित कार्यान्वयन वर्ष 2030 तक लगभग 14 लाख करोड़ रुपये की अतिरिक्त बचत उत्पन्न कर सकता है | वेस्ट /अपशिष्ट फेकने के पूर्व सोचें, ये किसी का संसाधन तो नहीं ...?
- अनुपयोगी इलेक्ट्रिक / इलेक्ट्रॉनिक उत्पाद को कचरे में फेकने से रुकें | इसके उपयुक्त निस्तारण हेतु इसे प्राधिकृत ई – वेस्ट रीसाइकलर को दें | प्राधिकृत ई-रीसाइकिलिंग इकाई में अनुपयोगी इलेक्ट्रिक / इलेक्ट्रॉनिक उत्पाद को देने मात्र से 0.75 मिलियन टन तक ई-कचरे का पुनर्चक्रण किया जा सकता है एवं ई-कचरे के विषम पर्यावरणीय दुष्प्रभाव से बचा जा सकता है
- बाहर जाते समय - सोचें कि क्या आपको वास्तव में परिवहन की आवश्यकता है - वह भी क्या व्यक्तिगत रूप से ? छोटी दूरी के लिए पैदल चलना पसंद करें, अथवा सम्भव हो तो कार पूल के रूप में संसाधन को साझा करें अथवा सार्वजनिक परिवहन पर विचार करें
- घरेलू स्तर पर कम से कम ठोस अपशिष्ट का उत्सर्जन करें और इनका प्रथाक्रीकरण करें
- उपयोगी शेष खाद्य सामग्री आपके स्वयं प्रयास अथवा निकटस्थ सक्रिय स्वयं सेवी संस्थाओं की सहायता से समाज के वंचित वर्ग तक पहुंचाई जा सकती है | वहीं अनुपयोगी भोजन /खाद्य सामग्री को कंपोस्ट (वर्मी कम्पोस्ट) करने से 15 अरब टन भोजन को नष्ट होने से बचाया जा सकता है
- ध्यान रखें - उपयुक्त नल और शावर के उपयोग से पानी की खपत को 30 - 40% तक कम किया जा सकता है। एवं उपयोग में न होने पर नलों को बंद रखने मात्र से 9 ट्रिलियन लीटर पानी बचाया जा सकता है
- ट्रैफिक लाइट/रेलवे क्रॉसिंग पर कार/स्कूटर के इंजन बंद करने मात्र से 22.5 बिलियन kWh तक ऊर्जा की बचत हो सकती है
- परम्परागत बल्ब के स्थान पर CFL का उपयोग बिजली की खपत में प्रभावी कमी लाते हैं | उपयोग में न होने पर बिजली उपकरणों को बंद करें | स्टार रेटेड विद्युत उपकरणों के उपयोग को प्राथमिकता दें

हमारे द्वारा अपनी जीवन शैली की प्राथमिकताओं का उचित और पर्यावरण अनुकूल पुनर्निर्धारण समाज और पर्यावरण के प्रति हमारा दायित्व है |

State Level Environment Impact Assessment Authority, Uttar Pradesh

Uploaded on
www.seiaaup.in

Directorate of Environment, U.P.

Vineet Khand-1, Gomti Nagar, Lucknow - 226 010

Phone : 91-522-2300 541, Fax : 91-522-2300 543

E-mail : docuplko@yahoo.com

Website : www.seiaaup.in

To,

M/s Shir Gang Industries and allied Products Ltd,
Plot no- B-2/6 & B-2/7, UPSIDC Industrial Area,
Sandila Phase IV, Lucknow Hardoi road,
Sandila, District- Hardoi, U.P.

Ref. No. 554/Parya/SEAC/4450/2018

Date: 11 December, 2018

Sub: Environmental Clearance for Proposed 55 KLPD Grain Based Distillery along with 2.0 MW Co-generation Power Plant at B-2/6 & B-2/7, UPSIDC Industrial Area, Sandila Phase-IV, Lucknow Hardoi Road, Tehsil- Sandila, District- Hardoi, U.P. M/s Shri Gang Industries and Allied Production Ltd, Regarding.

Dear Sir,

Please refer to your application/letters 09-08-2018, 17-08-2018, 02-11-2018, 13-11-2018 & 15-11-2018 addressed to the Chairman/Secretary, State Level Environment Impact Assessment Authority (SEIAA) and Director, Directorate of Environment Govt. of UP on the subject as above. The State Level Expert Appraisal Committee considered the matter in its meetings held on dated 15/11/2018 and SEIAA in its meeting dated 23/11/2018.

A presentation was made by the project proponent along with their consultant M/s J. M. Enviro Net Pvt. Ltd. The proponent, through the documents submitted and the presentation made, informed the committee that:-

1. The environmental clearance is sought for Proposed 55 KLPD Grain Based Distillery along with 2.0 MW Co-generation Power Plant at B-2/6 & B-2/7, UPSIDC Industrial Area, Sandila Phase-IV, Lucknow Hardoi Road, Tehsil- Sandila, District- Hardoi, U.P. M/s Shri Gang Industries and Allied Production Ltd.
2. Terms of reference in the matter were issued through MoEF&CC letter No. IA-J-11011/375/2017-IA-II (I)); dated 23rd August, 2017.
3. Public Hearing was conducted on 25/04/2018.
4. Salient features of the project as submitted by the project proponent:

S. No.	Particulars	Details
A.	Project Proposal	55 KLPD Grain based Distillery along with 2.0 MW Co-Generation Power Plant
B.	Location Details	Plot No. B-2/6 & B-2/7, UPSIDC Industrial Area, Sandila Phase IV, Lucknow Hardoi Road, Tehsil Sandila, District Hardoi (Uttar Pradesh)
C.	Area Details	
1.	Total land for proposed distillery	12.17 Hectares (30.09 Acres)
2.	Greenbelt & Plantation area	4.0 ha, i.e. ~33% of the project area will be covered under greenbelt & plantation
D.	Cost Details	
1.	Total Cost of the Project	Rs. 125.32 Crores
2.	Cost for Environmental Protection Measures	Capital Cost - Rs. 10 Crores Recurring Cost - Rs. 1 Crore/annum

5. Raw material details:

S.N.	Main Raw Material	Total requirement	Source	Storage
1.	Grain	129 - 135 TPD	Through vendors via road (5 to 500 km)	Silo (1500X 2= 3000 MT) & Godowns

6. Other salient feature details:

S.N.	Basic Requirement for the Project			
	Particulars	Total requirement	Source	
1.	Water	571 KLPD	Ground Water	



2.	Power	1.8 MW	Proposed 2.0 MW Co-Generation Power Plant & D.G Sets (for emergency)	
3.	Manpower	Persons(Direct) 400 persons (Indirect)	Unskilled/Semi skilled from Local area, Skilled from local/ Outside areas	
4.	Fuel	Rice husk (Biomass) or	120 TPD	Through local vendors by road
		Coal	85 TPD	Authorized dealers
5.	Steam	14.9 TPH	Proposed 18 TPH boiler	

7. Solid waste from the grain based operations generally comprises of fibers and proteins in the form of DDGS (30 TPD), which will be ideally used as cattle feed. Yeast sludge will be added to wet cake.
8. Ash (20 TPD) from the boiler will be supplied to brick manufacturers & cement plant.
9. The distillery will be based on "Zero Effluent Discharge".
10. The project proposal falls under category-5(g) of EIA Notification, 2006 (as amended).

Based on the recommendations of the State Level Expert Appraisal Committee Meeting (SEAC) held on 15/11/2018 the State Level Environment Impact Assessment Authority (SEIAA) in its Meeting held on 23/11/2018 decided to grant the Environmental Clearance for proposed project along with subject to the effective implementation of the following general & specific condition:

I. Statutory compliance:

1. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
2. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
3. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six - monthly compliance report. (in case of the presence of schedule-I species in the study area).
4. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board/ Committee.
5. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.
6. The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSiHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989

II. Air quality monitoring and preservation.

1. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
2. The project proponent shall install system carryout to Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions. (case to case basis small plants: Manual; Large plants: Continuous).
3. The project proponent shall submit monthly summary report of continuous stack emission and



air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six- monthly monitoring report.

4. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
5. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be complied with.
6. Sulphur content should not exceed 0.5% in the coal for use in coal fired boilers to control particulate emissions within permissible limits (as applicable). The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.
7. The DG sets shall be equipped with suitable pollution control devices and the adequate stack height so that the emissions are in conformity with the extant regulations and the guidelines in this regard.
8. Storage of raw materials, coal etc shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.

III. Water quality monitoring and preservation:

1. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises (applicable in case of the projects achieving ZLD) and connected to SPCB and CPCB online servers.
2. Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises (applicable in case of the projects achieving the ZLD).
3. Process effluent /any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.
4. The effluent discharge shall conform to the standards prescribed under the Environment (Protection) Rules, 1986, or as specified by the State Pollution Control Board while granting Consent under the Air/Water Act, whichever is more stringent.
5. Total fresh water requirement shall not exceed the proposed quantity or as specified by the Committee. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard.
6. Industrial/trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams, High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP and then passed through RO system.
7. The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and utilize the same for different industrial operations within the plant.

IV. Noise monitoring and prevention:

1. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
2. The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation.
3. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

V. Energy Conservation measures:

1. The energy sources for lighting purposes shall preferably be LED based.

VI. Waste management:

1. Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall



- be provided on tank farm and the solvent transfer through pumps.
2. Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.
 3. The company shall undertake waste minimization measures as below :-
 - i. Metering and control of quantities of active ingredients to minimize waste .
 - ii. Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
 - iii. Use of automated filling to minimize spillage.
 - iv. Use of Close Feed system into batch reactors.
 - v. Venting equipment through vapour recovery system.
 - vi. Use of high pressure hoses for equipment clearing to reduce wastewater generation

VII. Green Belt:

1. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.

VIII. Safety, Public hearing and Human health issues:

1. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
2. The PP shall provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
3. Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.
4. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
5. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
6. There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places

IX. Corporate Environment Responsibility:

1. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
2. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements /deviation/violation of the environmental / forest /wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation/ violation of the environmental/ forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
3. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive , who will directly report to the head of the organization.
4. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan



shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

5. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

X. Miscellaneous:

1. Directions/suggestions given during public hearing and Commitment made by the project proponent should be strictly complied.
2. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
3. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
4. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
5. The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
6. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
7. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
8. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
9. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
10. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
11. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
12. Concealing factual data or submission of false /fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
13. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
14. The Ministry reserves the right to stipulate additional conditions if found necessary.
15. The Company in a time bound manner shall implement these conditions.
16. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
17. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the



Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

18. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

No construction/operation is to be started without obtaining Prior Environmental Clearance. Concealing factual data and information or submission of false/fabricated data and failure to comply with any of the conditions stipulated in the Prior Environmental Clearance attract action under the provision of Environmental (Protection) Act, 1986.

This Environmental Clearance is subject to ownership of the site by the project proponents in confirmation with approved Master Plan for Hardoi. In case of violation; it would not be effective and would automatically be stand cancelled.

The project proponent has to ensure that the proposed site is not a part of any no-development zone as required/prescribed/indentified under law. In case of the violation this permission shall automatically deemed to be cancelled. Also, in the event of any dispute on ownership or land use of the proposed site, this Clearance shall automatically deemed to be cancelled.

Further project proponent has to submit the regular 6 monthly compliance report regarding general & specific conditions as specified in the E.C. letter and comply the provision of EIA notification 2006 (as Amended).

These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006 including the amendments and rules made thereafter.



(Ashish Tiwari)
Member Secretary, SEIAA

No...../Parya/SEAC/4450/2018 Dated: As above

Copy with enclosure for information and necessary action to:

1. The Principal Secretary, Department of Environment, Govt. of Uttar Pradesh, Lucknow.
2. Advisor, IA Division, Ministry of Environment, Forests & Climate Change, Govt. of India, Indira Paryavaran Bhawan, Jor Bagh Road, Aliganj, New Delhi.
3. Additional Director, Regional Office, Ministry of Environment & Forests, (Central Region), Kendriya Bhawan, 5th Floor, Sector-H, Aliganj, Lucknow.
4. District Magistrate Hardoi.
5. The Member Secretary, U.P. Pollution Control Board, TC-12V, Paryavaran Bhawan, Vibhuti Khand, Gomti Nagar, Lucknow.
6. Copy to Web Master/ guard file.

(Ashish Tiwari)
Member Secretary, SEIAA



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ETRC/PM09/TEST-REP/FT/45

TEST REPORT WATER & WASTE WATER ANALYSIS

Test Report Ref No.: ETRC/1804/13726/2024	Date of Report: 18.04.2024
Name /Address/Type of Industry	M/s Shri Gang Industries and Allied Products Ltd. Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area Sandila Phase IV, Lucknow Hardoi Road, Sandila District: Hardoi (U.P.) - 241204

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	Borewell	6	Sample Collected By	Industry self
3	Sample received date	11.04.2024	7	Analysis Start Date	11.04.2024
4	Sample Quantity	5.0 liters	8	Analysis End Date	17.04.2024

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
Physico-chemical Parameters							
1	Colour	Hazen	IS: 3025 (Part - 04): 2021	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part - 05): 2018	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 24 th Ed. 2023 - 4500 H ⁺	7.4	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24 th Ed. 2023 - 2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part - 16): 2023	406.0	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th Ed. 2023 - 5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part - 40): 1991 Reaffirmed: 2019	56.0	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24 th Ed. 2023 - 3500 Mg, B	33.048	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-Cl ⁻ B	26.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F ⁻ C	0.29	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part - 26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part - 34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	mg/l	APHA 24 th Ed. 2023 - 5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ²⁻	28.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	312.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	276.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.12	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.03	0.02 - 5.0	0.1	0.3



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Test Report Ref No.: ETRC/1804/13726/2024

23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.39	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 24 th Ed. 2023 - 3112 B	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
Microbiological Parameters							
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

..... END OF REPORT.....

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Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge




Authorized Signatory
(Ritu Garg)
QM



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ETRC/PM09/TEST-REP/FT/45

TEST REPORT WATER & WASTE WATER ANALYSIS

Test Report Ref No.: ETRC/1505/13727/2024	Date of Report: 15.05.2024
Name /Address/Type of Industry	M/s Shri Gang Industries and Allied Products Ltd. Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area Sandila Phase IV, Lucknow Hardoi Road, Sandila District: Hardoi (U.P.) - 241204

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	Borewell	6	Sample Collected By	Industry self
3	Sample received date	09.05.2024	7	Analysis Start Date	09.05.2024
4	Sample Quantity	5.0 liters	8	Analysis End Date	14.05.2024

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
Physico-chemical Parameters							
1	Colour	Hazen	IS: 3025 (Part - 04): 2021	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part - 05): 2018	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 24 th Ed. 2023 - 4500 H ⁺	7.6	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24 th Ed. 2023 - 2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part - 16): 2023	386.0	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th Ed. 2023 - 5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part - 40): 1991 Reaffirmed: 2019	59.2	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24 th Ed. 2023 - 3500 Mg, B	29.16	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-Cl ⁻ B	20.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F ⁻ C	0.42	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part - 26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part - 34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	mg/l	APHA 24 th Ed. 2023 - 5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ²⁻	30.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	296.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	268.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.09	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.04	0.02 - 5.0	0.1	0.3



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23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.52	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 24 th Ed. 2023 - 3112 B	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
Microbiological Parameters							
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

..... END OF REPORT.....

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Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge




Authorized Signatory
(Ritu Garg)
QM



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ETRC/PM09/TEST-REP/FT/45

TEST REPORT WATER & WASTE WATER ANALYSIS

Test Report Ref No.: ETRC/1206/13728/2024	Date of Report: 12.06.2024
Name /Address/Type of Industry	M/s Shri Gang Industries and Allied Products Ltd. Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area Sandila Phase IV, Lucknow Hardoi Road, Sandila District: Hardoi (U.P.) - 241204

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	Borewell	6	Sample Collected By	Industry self
3	Sample received date	07.06.2024	7	Analysis Start Date	07.06.2024
4	Sample Quantity	5.0 liters	8	Analysis End Date	11.06.2024

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
Physico-chemical Parameters							
1	Colour	Hazen	IS: 3025 (Part - 04): 2021	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part - 05): 2018	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 24 th Ed. 2023 - 4500 H ⁺	7.4	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24 th Ed. 2023 - 2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part - 16): 2023	382.0	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th Ed. 2023 - 5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part - 40): 1991 Reaffirmed: 2019	57.6	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24 th Ed. 2023 - 3500 Mg, B	26.24	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-Cl ⁻ B	24.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F ⁻ C	0.33	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part - 26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part - 34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	mg/l	APHA 24 th Ed. 2023 - 5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ²⁻	26.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	284.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	252.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.14	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.05	0.02 - 5.0	0.1	0.3



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Test Report Ref No.: ETRC/1206/13728/2024

23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.19	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 24 th Ed. 2023 - 3112 B	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
Microbiological Parameters							
30	E. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	


BDL=Below Detection Limit

..... END OF REPORT.....

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ETRC/PM09/TEST-REP/FT/45

TEST REPORT WATER & WASTE WATER ANALYSIS

Test Report Ref No.: ETRC/1707/13729/2024	Date of Report: 17.07.2024
Name /Address/Type of Industry	M/s Shri Gang Industries and Allied Products Ltd. Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area Sandila Phase IV, Lucknow Hardoi Road, Sandila District: Hardoi (U.P.) - 241204

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	Borewell	6	Sample Collected By	Industry self
3	Sample received date	12.07.2024	7	Analysis Start Date	12.07.2024
4	Sample Quantity	5.0 liters	8	Analysis End Date	16.07.2024

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
Physico-chemical Parameters							
1	Colour	Hazen	IS: 3025 (Part - 04): 2021	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part - 05): 2018	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 24 th Ed. 2023 - 4500 H ⁺	7.5	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24 th Ed. 2023 - 2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part - 16): 2023	368.8	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th Ed. 2023 - 5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part - 40): 1991 Reaffirmed: 2019	52.8	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24 th Ed. 2023 - 3500 Mg, B	28.18	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-Cl ⁻ B	30.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F ⁻ C	0.38	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part - 26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part - 34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	mg/l	APHA 24 th Ed. 2023 - 5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ²⁻	32.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	280.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	248.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.10	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.08	0.02 - 5.0	0.1	0.3



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Test Report Ref No.: ETRC/1707/13729/2024

23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.25	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 24 th Ed. 2023 - 3112 B	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
Microbiological Parameters							
30	E. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	

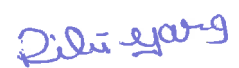
BDL=Below Detection Limit

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ETRC/PM09/TEST-REP/FT/45

TEST REPORT WATER & WASTE WATER ANALYSIS

Test Report Ref No.: ETRC/2108/13730/2024	Date of Report: 21.08.2024
Name /Address/Type of Industry	M/s Shri Gang Industries and Allied Products Ltd. Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area Sandila Phase IV, Lucknow Hardoi Road, Sandila District: Hardoi (U.P.) - 241204

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	Borewell	6	Sample Collected By	Industry self
3	Sample received date	16.08.2024	7	Analysis Start Date	16.08.2024
4	Sample Quantity	5.0 liters	8	Analysis End Date	20.08.2024

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
Physico-chemical Parameters							
1	Colour	Hazen	IS: 3025 (Part - 04): 2021	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part - 05): 2018	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 24 th Ed. 2023 - 4500 H ⁺	7.4	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24 th Ed. 2023 - 2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part - 16): 2023	390.6	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th Ed. 2023 - 5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part - 40): 1991 Reaffirmed: 2019	54.4	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24 th Ed. 2023 - 3500 Mg, B	32.076	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-Cl ⁻ B	28.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F ⁻ C	0.29	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part - 26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part - 34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	mg/l	APHA 24 th Ed. 2023 - 5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ²⁻	28.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	292.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	268.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.12	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.03	0.02 - 5.0	0.1	0.3



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23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.43	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 24 th Ed. 2023 - 3112 B	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
Microbiological Parameters							
30	E. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	

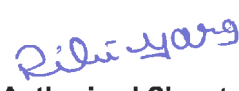
BDL=Below Detection Limit

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ETRC/PM09/TEST-REP/FT/42

TEST REPORT AMBIENT AIR QUALITY MONITORING REPORT

Test Report Ref No.: ETRC/1909/13731/2024		Date of Report: 19.09.2024	
Name /Address/Type of Industry		M/s Shri Gang Industries and Allied Products Ltd. Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area Sandila Phase IV, Lucknow Hardoi Road, Sandila District: Hardoi (U.P.) - 241204	
Monitored by		ETRC, Lucknow	
Location of Sampling points		Near Main Gate of Premises	
Sr. No.	GENERAL OBSERVATIONS	DETAILS-PM₁₀	DETAILS-PM_{2.5}
1(a)	Weather conditions	Clear	Clear
(b)	Wind direction	West to East	West to East
(c)	Average humidity (%)	56	56
(d)	Average ambient temperature (°C)	32	32
(e)	Time of Sampling Started (Hours)	10:23 am (11.09.2024)	10:23 am (11.09.2024)
(f)	Time of Sampling completed (Hours)	10:06 am (12.09.2024)	10:06 am (12.09.2024)
(g)	Total time of sampling (Minutes)	24 hour (1412 minutes)	24 hour (1412 minutes)
2	Average Air sampling rate for PM (m ³ /minute)	1.170	NA
3	Average sampling rate for gas (LPM)	0.5	NA
4	TOTAL VOLUME OF AIR SAMPLED		
	• PM	• 1651.806	• 23.528
	• GAS	• 705.9	

TEST RESULT

Sr. No.	Particulars	Protocol	Unit	Result	Range of testing /limit of detection	Standard as per NAAQS; dated 18/11/ 2009
1	Particulate matters size less than 10 µm (PM ₁₀)	IS: 5182 (Part-23): 2006 Reaffirmed: 2022	µg/m ³	89.6	5.0 - 1200	For 24 hour =100
2	Particulate matters size less than 2.5 µm (PM _{2.5})	IS: 5182 (Part-24): 2019	µg/m ³	53.55	2.0 - 500	For 24 hour =60
3	Sulphur Dioxide (SO ₂)	IS: 5182 (Part-02): 2001 Reaffirmed: 2022	µg/m ³	15.46	5.0 - 1050	For 24 hour =80
4	Oxides of Nitrogen (NO _x)	IS: 5182 (Part-06): 2006 Reaffirmed: 2022	µg/m ³	22.04	6.0 - 750	For 24 hour =80

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(Sandeep Kr Verma)
Lab-Incharge



Authorized Signatory
(Ritu Garg)
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TEST REPORT AMBIENT AIR QUALITY MONITORING REPORT

Test Report Ref No.: ETRC/1909/13732/2024		Date of Report: 19.09.2024	
Name /Address/Type of Industry		M/s Shri Gang Industries and Allied Products Ltd. Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area Sandila Phase IV, Lucknow Hardoi Road, Sandila District: Hardoi (U.P.) - 241204	
Monitored by		ETRC, Lucknow	
Location of Sampling points		Near Project Area	
Sr. No.	GENERAL OBSERVATIONS	DETAILS-PM ₁₀	DETAILS-PM _{2.5}
1(a)	Weather conditions	Clear	Clear
(b)	Wind direction	West to East	West to East
(c)	Average humidity (%)	56	56
(d)	Average ambient temperature (°C)	32	32
(e)	Time of Sampling Started (Hours)	10:38 am (11.09.2024)	10:38 am (11.09.2024)
(f)	Time of Sampling completed (Hours)	10:17 am (12.09.2024)	10:17 am (12.09.2024)
(g)	Total time of sampling (Minutes)	24 hour (1410 minutes)	24 hour (1410 minutes)
2	Average Air sampling rate for PM (m ³ /minute)	1.180	NA
3	Average sampling rate for gas (LPM)	0.5	NA
4	TOTAL VOLUME OF AIR SAMPLED		
	• PM	• 1663.800	• 23.492
	• GAS	• 705.0	

TEST RESULT


Sr. No.	Particulars	Protocol	Unit	Result	Range of testing /limit of detection	Standard as per NAAQS; dated 18/11/ 2009
1	Particulate matters size less than 10 µm (PM ₁₀)	IS: 5182 (Part-23): 2006 Reaffirmed: 2022	µg/m ³	84.2	5.0 - 1200	For 24 hour =100
2	Particulate matters size less than 2.5 µm (PM _{2.5})	IS: 5182 (Part-24): 2019	µg/m ³	52.36	2.0 - 500	For 24 hour =60
3	Sulphur Dioxide (SO ₂)	IS: 5182 (Part-02): 2001 Reaffirmed: 2022	µg/m ³	14.76	5.0 - 1050	For 24 hour =80
4	Oxides of Nitrogen (NO _x)	IS: 5182 (Part-06): 2006 Reaffirmed: 2022	µg/m ³	20.23	6.0 - 750	For 24 hour =80

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ETRC/PM09/TEST-REP/FT/42

TEST REPORT AMBIENT AIR QUALITY MONITORING REPORT

Test Report Ref No.: ETRC/1909/13733/2024		Date of Report: 19.09.2024	
Name /Address/Type of Industry		M/s Shri Gang Industries and Allied Products Ltd. Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area Sandila Phase IV, Lucknow Hardoi Road, Sandila District: Hardoi (U.P.) - 241204	
Monitored by		ETRC, Lucknow	
Location of Sampling points		Village: Muradnagar	
Sr. No.	GENERAL OBSERVATIONS	DETAILS-PM ₁₀	DETAILS-PM _{2.5}
1(a)	Weather conditions	Clear	Clear
(b)	Wind direction	West to East	West to East
(c)	Average humidity (%)	56	56
(d)	Average ambient temperature (°C)	32	32
(e)	Time of Sampling Started (Hours)	10:48 am (11.09.2024)	10:48 am (11.09.2024)
(f)	Time of Sampling completed (Hours)	10:29 am (12.09.2024)	10:29 am (12.09.2024)
(g)	Total time of sampling (Minutes)	24 hour (1405 minutes)	24 hour (1405 minutes)
2	Average Air sampling rate for PM (m ³ /minute)	1.200	NA
3	Average sampling rate for gas (LPM)	0.5	NA
4	TOTAL VOLUME OF AIR SAMPLED		
	• PM	• 1685.520	• 23.405
	• GAS	• 702.3	

TEST RESULT

Sr. No.	Particulars	Protocol	Unit	Result	Range of testing /limit of detection	Standard as per NAAQS; dated 18/11/ 2009
1	Particulate matters size less than 10 µm (PM ₁₀)	IS: 5182 (Part-23): 2006 Reaffirmed: 2022	µg/m ³	77.3	5.0 - 1200	For 24 hour =100
2	Particulate matters size less than 2.5 µm (PM _{2.5})	IS: 5182 (Part-24): 2019	µg/m ³	48.28	2.0 - 500	For 24 hour =60
3	Sulphur Dioxide (SO ₂)	IS: 5182 (Part-02): 2001 Reaffirmed: 2022	µg/m ³	12.66	5.0 - 1050	For 24 hour =80
4	Oxides of Nitrogen (NO _x)	IS: 5182 (Part-06): 2006 Reaffirmed: 2022	µg/m ³	17.32	6.0 - 750	For 24 hour =80

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TEST REPORT AMBIENT AIR QUALITY MONITORING REPORT

Test Report Ref No.: ETRC/1909/13734/2024		Date of Report: 19.09.2024	
Name /Address/Type of Industry		M/s Shri Gang Industries and Allied Products Ltd. Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area Sandila Phase IV, Lucknow Hardoi Road, Sandila District: Hardoi (U.P.) - 241204	
Monitored by		ETRC, Lucknow	
Location of Sampling points		Village: Bakhsh Khara	
Sr. No.	GENERAL OBSERVATIONS	DETAILS-PM ₁₀	DETAILS-PM _{2.5}
1(a)	Weather conditions	Clear	Clear
(b)	Wind direction	West to East	West to East
(c)	Average humidity (%)	55	55
(d)	Average ambient temperature (°C)	31	31
(e)	Time of Sampling Started (Hours)	10:20 am (12.09.2024)	10:20 am (12.09.2024)
(f)	Time of Sampling completed (Hours)	10:08 am (13.09.2024)	10:08 am (13.09.2024)
(g)	Total time of sampling (Minutes)	24 hour (1403 minutes)	24 hour (1403 minutes)
2	Average Air sampling rate for PM (m ³ /minute)	1.170	NA
3	Average sampling rate for gas (LPM)	0.5	NA
4	TOTAL VOLUME OF AIR SAMPLED		
	• PM	• 1641.978	• 23.386
	• GAS	• 701.7	

TEST RESULT

Sr. No.	Particulars	Protocol	Unit	Result	Range of testing /limit of detection	Standard as per NAAQS; dated 18/11/ 2009
1	Particulate matters size less than 10 µm (PM ₁₀)	IS: 5182 (Part-23): 2006 Reaffirmed: 2022	µg/m ³	76.8	5.0 - 1200	For 24 hour =100
2	Particulate matters size less than 2.5 µm (PM _{2.5})	IS: 5182 (Part-24): 2019	µg/m ³	46.61	2.0 - 500	For 24 hour =60
3	Sulphur Dioxide (SO ₂)	IS: 5182 (Part-02): 2001 Reaffirmed: 2022	µg/m ³	13.20	5.0 - 1050	For 24 hour =80
4	Oxides of Nitrogen (NO _x)	IS: 5182 (Part-06): 2006 Reaffirmed: 2022	µg/m ³	18.76	6.0 - 750	For 24 hour =80

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(Sandeep Kr Verma)
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ETRC/PM09/TEST-REP/FT/42

TEST REPORT AMBIENT AIR QUALITY MONITORING REPORT

Test Report Ref No.: ETRC/1909/13735/2024		Date of Report: 19.09.2024	
Name /Address/Type of Industry		M/s Shri Gang Industries and Allied Products Ltd. Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area Sandila Phase IV, Lucknow Hardoi Road, Sandila District: Hardoi (U.P.) - 241204	
Monitored by		ETRC, Lucknow	
Location of Sampling points		Village: Mahsona	
Sr. No.	GENERAL OBSERVATIONS	DETAILS-PM ₁₀	DETAILS-PM _{2.5}
1(a)	Weather conditions	Clear	Clear
(b)	Wind direction	West to East	West to East
(c)	Average humidity (%)	55	55
(d)	Average ambient temperature (°C)	31	31
(e)	Time of Sampling Started (Hours)	10:40 am (12.09.2024)	10:40 am (12.09.2024)
(f)	Time of Sampling completed (Hours)	10:26 am (13.09.2024)	10:26 am (13.09.2024)
(g)	Total time of sampling (Minutes)	24 hour (1409 minutes)	24 hour (1409 minutes)
2	Average Air sampling rate for PM (m ³ /minute)	1.175	NA
3	Average sampling rate for gas (LPM)	0.5	NA
4	TOTAL VOLUME OF AIR SAMPLED		
	• PM	• 1655.340	• 23.473
	• GAS	• 704.4	

TEST RESULT

Sr. No.	Particulars	Protocol	Unit	Result	Range of testing /limit of detection	Standard as per NAAQS; dated 18/11/ 2009
1	Particulate matters size less than 10 µm (PM ₁₀)	IS: 5182 (Part-23): 2006 Reaffirmed: 2022	µg/m ³	78.6	5.0 - 1200	For 24 hour =100
2	Particulate matters size less than 2.5 µm (PM _{2.5})	IS: 5182 (Part-24): 2019	µg/m ³	47.71	2.0 - 500	For 24 hour =60
3	Sulphur Dioxide (SO ₂)	IS: 5182 (Part-02): 2001 Reaffirmed: 2022	µg/m ³	13.24	5.0 - 1050	For 24 hour =80
4	Oxides of Nitrogen (NO _x)	IS: 5182 (Part-06): 2006 Reaffirmed: 2022	µg/m ³	18.42	6.0 - 750	For 24 hour =80

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ETRC/PM09/TEST-REP/FT/43

TEST REPORT STACK EMISSION MONITORING AND ANALYSIS REPORT

Test Report Ref No.: ETRC/1909/13736/2024		Date of Report: 19.09.2024
Name /Address/Type of Industry		M/s Shri Gang Industries and Allied Products Ltd. Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area Sandila Phase IV, Lucknow Hardoi Road, Sandila District: Hardoi (U.P.) - 241204
Monitored by		ETRC, Lucknow
Sr. No.	GENERAL INFORMATION	DETAILS
1.(a)	Date of monitoring	11.09.2024
(b)	Stack material	MS
(c)	Height of stack from ground level	42.0 mts
(d)	Source to which stack attached	Boiler
(e)	No of boiler attached with capacity	01 No. (18.0 TPH)
(f)	Type and quantity of fuel used	Biomass
(g)	Details of APCS installed	ESP
2.	PARAMETERS	VALUES
(a)	Ambient temperature (°C)	34.0
(b)	Stack gas temperature (°C)	138.0
(c)	Stack gas velocity (m/sec)	11.89
(d)	Flow rate (LPM)	17
(e)	Sampling time (minutes)	60
(f)	Volume of air sampled (liters)	1020

TEST RESULT

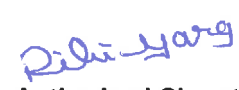
Sr. No.	Parameter	Unit	Protocol	Result	Range of Testing/ Limit of Detection	Standard (as per CPCB)
1	Particulate Matter	mg/Nm ³	IS: 11255 (Part-01): 1985 Reaffirmed: 2019	46.08	2.0 - 1000	150

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ETRC/PM09/TEST-REP/FT/44

TEST REPORT

AMBIENT NOISE MONITORING AND ANALYSIS REPORT

Test Report Ref No.: ETRC/1909/13737/2024		Date of Report: 19.09.2024
Name /Address/Type of Industry		M/s Shri Gang Industries and Allied Products Ltd. Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area Sandila Phase IV, Lucknow Hardoi Road, Sandila District: Hardoi (U.P.) - 241204
Monitored by		ETRC, Lucknow
Sr. No.	GENERAL INFORMATION	DETAILS
(a)	Date of monitoring	12/09/2024 (06:00 AM) to 13/09/2024 (06:00 AM)
(b)	Sample Description	Ambient Noise
(c)	Sampling Location	Near Project Premises
(d)	Environmental Condition	Normal
(e)	Monitoring Protocol	IS: 9989: 1981, Reaffirmed: 2020

TEST RESULT

Ambient Noise Level				
Sr. No.	Parameter	Unit	Results Day Time (06:00 AM - 10:00 PM)	Results Night Time (10:00 PM - 06:00 AM)
1	Equivalent sound level	dB(A)	62.25	49.26

Noise Standards as per CPCB Schedule rule 3(1) and 4(1)			
Area Code	Category of Area/Zone	Limits in dB(A) Leq	
		Day Time	Night Time
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40

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ETRC/PM09/TEST-REP/FT/45

TEST REPORT WATER & WASTE WATER ANALYSIS

Test Report Ref No.: ETRC/1909/13738/2024	Date of Report: 19.09.2024
Name /Address/Type of Industry	M/s Shri Gang Industries and Allied Products Ltd. Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area Sandila Phase IV, Lucknow Hardoi Road, Sandila District: Hardoi (U.P.) - 241204

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	Borewell	6	Sample Collected By	Industry self
3	Sample received date	13.09.2024	7	Analysis Start Date	13.09.2024
4	Sample Quantity	5.0 liters	8	Analysis End Date	18.09.2024

TEST RESULT

Sr. No	Test Parameter	Unit	Protocol/Test Method	Result	Range of testing /limit of detection	Indian Standard 10500: 2012	
						Desirable	Permissible
Physico-chemical Parameters							
1	Colour	Hazen	IS: 3025 (Part - 04): 2021	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part - 05): 2018	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 24 th Ed. 2023 - 4500 H ⁺	7.3	1 - 14	6.5-8.5	No Relaxation
4	Turbidity	NTU	APHA 24 th Ed. 2023 - 2130 B	BDL	2 - 40	1	5
5	Total Dissolved Solids (TDS)	mg/l	IS: 3025 (Part - 16): 2023	396.4	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 24 th Ed. 2023 - 4500-NH ₃ F	BDL	0.5 - 2.0	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 24 th Ed. 2023 - 5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part - 40): 1991 Reaffirmed: 2019	54.4	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 24 th Ed. 2023 - 3500 Mg, B	26.24	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 24 th Ed. 2023 - 4500-Cl ⁻ B	24.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 24 th Ed. 2023 - 4500 F ⁻ C	0.30	0.02 - 5.0	1.0	1.5
12	Free Residual Chlorine	mg/l	IS: 3025 (Part - 26): 1986 Reaffirmed: 2019	BDL	0.1 - 5.0	0.2	1.0
13	Nitrate as NO ₃	mg/l	IS: 3025 (Part - 34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C ₆ H ₅ OH)	mg/l	APHA 24 th Ed. 2023 - 5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 24 th Ed. 2023 - 4500- SO ₄ ²⁻	24.0	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2320 B	284.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 24 th Ed. 2023 - 2340 C	244.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.09	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.04	0.02 - 5.0	0.1	0.3



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Test Report Ref No.: ETRC/1909/13738/2024

23	Zinc as Zn	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	0.55	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.003 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 24 th Ed. 2023 - 3112 B	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 24 th Ed. 2023 - 3120 B (ICP-OES)	BDL	0.03 - 5.0	0.05	No Relaxation
Microbiological Parameters							
30	E. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	1.8 - 1600	Shall not be detected in any 100 ml sample	


BDL=Below Detection Limit

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ETRC/PM09/TEST-REP/FT/46

TEST REPORT SOIL ANALYSIS

Test Report Ref No.: ETRC/1909/13739/2024	Date of Report: 19.09.2024
Name /Address/Type of Industry	M/s Shri Gang Industries and Allied Products Ltd. Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area Sandila Phase IV, Lucknow Hardoi Road, Sandila District: Hardoi (U.P.) - 241204

SAMPLE DETAILS

1	Sampling Location	Near Plant Area	5	Packing Condition	Sealed
2	Sample Description	Soil Sample	6	Sample Collected By	ETRC,
3	Sample received date	13.09.2024	7	Analysis Start Date	13.09.2024
4	Sample Quantity	500 g	8	Analysis End Date	18.09.2024

TEST REPORT

Sr. No.	Test Parameter	Unit	Protocol/ Test Method	Result	Range of testing /limit of detection
1	pH	-	IS: 2720 (Part - 26): 1987 Reaffirmed: 2021	7.3	1 - 14
2	Electrical Conductivity	µmhos/cm	IS: 14767: 2000 Reaffirmed: 2021	298.0	1.0 - 40000
3	Moisture content	%	IS :2720 (Part - 02): 1973 Reaffirmed: 2020	3.08	1.0 - 50
4	Sulphur	Kh/Hec	IS: 14685: 1999 Reaffirmed: 2019	12.25	5.0 - 100
5	Boron	mg/kg	Method Manual of Soil Testing in India	2.02	1.0 - 100
6	Copper	mg/kg	Method Manual of Soil Testing in India	0.36	0.3 - 500
7	Zinc	mg/kg	Method Manual of Soil Testing in India	11.46	1.0 - 500
8	Iron	mg/kg	Method Manual of Soil Testing in India	119.8	5.0 - 500
9	Manganese	mg/kg	Method Manual of Soil Testing in India	9.16	5.0 - 500

Method Manual of Soil Testing in India (Department of Agriculture and Corporation Ministry of Agriculture, Government of India), 4.6.3 (16b): 2022

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