

Ref. 56/2021/UP/IPL/15

Date: 28/01/2022

To

**Regional Director
Ministry of Environment Forest and Climate Change
Kendriya Bhawan, 5th Floor,
Sector H, Aliganj, Lucknow,
Uttar Pradesh-260224**

EC Compliance Period: April, 2021 to September, 2021

Project Status: Till date we have installed 95% of the plant and machinery and not started any production till date.

Subject: Submission of 6th Monthly Compliance Report of "Environmental Clearance" Conditions.

Ref. File No. 395/Parya/SEAC/5764-5646/2019 Dated 14 October, 2020.

Dear Madam/ Sir,

As per guidelines of MoEF & CC we are hereby submitting the compliance report on environmental clearance conditions stipulate in above mentioned EC.

The report comprises of documentary evidence of compliance of environmental clearance conditions.

Requesting you to accept the hard and soft copy (CD) reports submitted for information please.

Thanking You,

Yours Sincerely



Authorized Signatory

**M/s Indian Potash Limited (Distillery Unit)
Village Bahedi, P.O. Rohana Mill, Block Charthawal,
Tehsil and District: Muzaffarnagar (U.P.)**

Enclosures:

1. Copy of Consent to establish/CTO (Air and Water) issued by UPPCB
2. Test Report
3. Environmental Clearance

SIX-MONTHLY ENVIRONMENTAL COMPLIANCE REPORT

On Environmental Clearance Conditions

Environment Clearance Letter No: 395/Parya/SEAC/5764-5646/2019

(April 2021 to September 2021)

**Project Status: Till date we have installed 95% of the plant and machinery
and not started any production till date.**

For

**Expansion of existing molasses-based distillery from 45
KLD to 65.3 KLD (R5/ENA/AA) along with power plant
from 1.4 MW to 2.0 MW**

At

**M/s Indian Potash Limited (Distillery Unit)
Village Bahedi, P.O. Rohana Mill, Block Charthawal,
tehsil and District: Muzaffarnagar (U.P.)**

**For Submission to:
Ministry of Environment, Forest & Climate Change
(Regional Office, Lucknow)**

**Submitted By:
M/s Indian Potash Ltd. (Rohana Unit: Distillery).**

Name of the Project: M/s Indian Potash Ltd. (Rohana Distillery-Unit).

Environment Clearance Letter No: 395/Parya/SEAC/5764-5646/2019

Dated 14 October, 2020

Period of Compliance Report: (April 2021 to September 2021)

Chapter 1

Environment Clearance conditions:

Terms & Condition:

Sl. No.	Conditions	Reply
1.	The Environmental clearance is sought for Expansion of existing molasses-based distillery from 45 KLD to 65.3 KLD (RS/ENA/AA) along with power plant from 1.4 MW to 2.0 MW at Khasra No.-634, 634 M, 633, 631, 627, 626, 624 partly, 622, Village-Rohana Mill, Block: Charthawal, Tehsil & District: Muzaffarnagar (U.P.) by M/s Indian Potash Ltd. (Rohana Unit: Distillery).	
2.	The additional term of references in the matter were issued by SEIAA, U.P. vide letter no. 208/Parya/SEAC/5646/2018, dated 27 th July, 2020	
3.	Final EIA report submitted by the project proponent on 13 th August, 2020.	
4.	Salient features of the project	
	Item	Details
	Name of the Project	M/s Indian Potash Ltd. (Rohana Unit: Distillery) Village: Rohana Mill, Block: Charthawal, Tehsil & District: Muzaffarnagar (U.P.)
	Capacity of Distillery	Expansion from 45 KLD to 65.3 KLD (Rectified Spirit/Extra Neutral Alcohol/Ethanol)
	Power Generation	From 1.4 MW to 2.0 MW Co- Generation of Power.
	Category	Category "B" and Schedule - 5 (g)
5.	Project Summary	
	Particulars	Details of Proposed Project (Capacity: 65.3 KLD)
	Proposed capacity of Plant	Expansion of the existing project from 45 KLD to 65.3 KLD distillery (RS/ENA/AA) along with Co gen Power from 1.4 MW to 2 MW.
	Total project cost	Rs. 11300 Lakhs
	Total project area	6.988 Hectares (17.267 Acres) (Adjoining existing Sugar Mill) at Khasra no. 634, 634 M, 633, 631, 627, 626, 624 partly, 622M Partly Village: Rohana Mill, Block: Charthawal, Tehsil & District: Muzaffarnagar (U.P.)
	Category of Project	Category: B and Schedule: 5 (g)
	Process Involve	Distillery Process:

	1. Molasses Dilution 2. Yeast Propagation 3. Fermentation 4. Multi Pressure Distillation
Product	RS/ ENA / Ethanol (AA): 65.3 KLD
Raw material and its Quantity	Molasses) & Sugarcane Syrup 284 MT/DAY of C-Molasses or 200 MT/Day of B-Heavy Molasses or 218 MT/Day of 50% Sugar Syrup Source: Adjacent own sugar unit & other standalone unit in nearby areas.
Co-Gen Power Generation	2.0 MW Co generation power
Fresh Water Requirement	Fresh Water Requirement : 445 KLD (Industrial Use) Source: Treated and Condensate water from adjacent sugar industry as well as surface water through canal.
Power requirement	The total power requirement for the project will be 1.8 MW. Source: Proposed 2.0 MW Co – Generation Power Plant.
Fuel and its quantity	Slop will be incinerated in boiler along with coal/husk as supporting fuel. Slop: 166 TPD Coal Requirement: 60 TPD (or Husk: 70 TPD)
Steam requirement	17 TPH
Number of boiler	1 no. Boiler: 22 TPH Technology: (Slop Fired incineration Boiler)
Air Pollution Control Device	ESP
Number of Stack	Proposed One Stack: 70 Meters
Waste Water treatment	Spent wash treatment: 326 KLD It will be concentrated in Multi effect evaporation and then concentrate from MEE will be utilized in Incineration fired boiler as a fuel along with Coal/ Husk. Other effluent treatment: 507 KLD MEE condensate, Blowdowns of CT, Boiler, Floor washing etc will be treated in CPU and treated water will be recycled back to process and cooling in Distillation & CT.
Waste Water Discharge	Unit is based Zero Liquid discharge Industry (ZLD)
Solid Waste Generation	Total Ash generated: 35 TPD

		Fermenter sludge: 2 TPD Disposal: Total Ash will be used as Soil conditioner; Fermenter Sludge will be dried in sludge drying bed and used as Manure.		
	No of Working Days	350 Days / Annum.		
	Employment Generation	80 Number		
	Green Belt Development	33% of the project area will be covered under green belt plantation (2.306 Hectare)		
	Cost towards Environmental Protection measures (capital cost)	40 Crores (it include Waste water treatment system, Boiler, MEE, APCS, Green Belt, Health Safety equipment, granules formation machinery etc)		
	Recurring cost towards Environmental control measures	1 Crore per year.		
	CSR expenses	2% of total annual Profit as per the CSR Act (By Ministry of corporate affairs) Notification GSR 129 (E).		
	Corporate Environmental Responsibility (CER)	169.5 lakhs (1.5% of project cost)		
6.	Land Use Details			
	Land use	Area (sqm)	Area in %	
	Green Belt Area	23,060.0	33.00	
	Open Land	23396.3	33.48	
	Road/ Paved Area	4330.0	6.20	
	Covered /Rooftop area of building/sheds	19093.7	27.32	
	GRAND TOTAL	69,880.0	100	
7.	Raw material required with daily consumption and transport			
	Particular	Requirement	Storage	Source and mode of transportation
	Molasses (All variants like B-Heavy, Final C-Molasses) & Sugarcane	C-Molasses: 284 MT/Day or B-Heavy Molasses :200 MT/Day	Molasses storage tanks	Through Sugar Mills via Road

	Syrup	or 218 MT/Day of 50% Sugar Syrup		
Other Chemicals				
	Sulphuric Acid	435 Kg/day	Storage facility will be available for the chemical within proposed distillery premises as per requirement	Nearby markets/ by roads
	Sodium hydroxide (caustic)	870 kg/ day		
	Nutrients	205 kg/day		
	Enzymes	35.7 kg/Day		
	Anti-foam agents	58.0 kg/Day		
8.	Plant and machinery: 1) 65.3 KLD Ethanol plant with integrated evaporator and alcohol storage system, MEE 2) 22 TPH concentrated spent wash (slop) fired incineration boiler including air pollution control system (ESP) 3) Ash handling system, 4) Fuel handling system 5) Turbo generator & condenser with arrangement for the export of surplus power 6) Power distribution system 7) Cooling towers 8) Plant piping, valves etc 9) Pumps with drive motors 10) Condensate Polishing Plan 11) Distributed control system 12) Fire fighting system etc. 13) Molasses storage tanks 14) Product storage tanks 15) Weighbridges 16) RCC Chimney			
9.	Water requirement details			
	Industry Use	445 KLD (@ 6.8 KL/ KL of product)		
	Domestic Use	20 KLD		
	Total Water Requirement	465 KLD		
	Source: Treated and Condensate water from adjacent sugar industry as well as surface water through canal.			
10.	Waste water generation			

	Waste Water Generation	Spent Wash: 326 KLD (@ 5 KL/KL of Product) Other Effluents: 507 KLD
	Treatment Technology	Spent wash treatment: It will be concentrated in Multi effect evaporation and then concentrate from MEE will be utilized in Incineration fired boiler as a fuel along with Coal/Husk. Other effluent treatment: MEE condensate, Blow downs of CT, Boiler, Floor washing etc. will be treated in CPU and treated water will be recycled back to process and cooling in Distillation & CT
11.	The project proposal falls under Category “B” and Schedule - 5 (g) of EIA Notification, 2006 (as amended).	

I.	Statutory compliance:	
	Condition	Compliance
1.	45 days monitoring report of the area for air quality, water quality, Noise level. Besides flora & fauna should be examined twice a week and be submitted within 60 days for a record.	Unit has already submitted the monitoring reports w.r.t. air quality, water quality, Noise to SEIAAUP.
2.	Due to unavoidable circumstance and covid-19 pandemic, the authority are unable to visit the site therefore, it is not possible to make available the latest certified compliance report. In view of this the committee decided that the certified compliance report should be submitted within 03 months.	Unit will submit the certified compliance report before start of plant.
3.	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.	Not applicable, No any forest area is observed in study area, hence forest clearance not required.
4.	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	Not applicable.
5.	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-	No schedule-I species is found in study area, hence this condition is not applicable.

	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).	
6.	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.	The unit has obtained Consent to Establish from Uttar Pradesh Pollution Control Board. Copy enclosed as enclosure 1 . Unit will obtain Consent to Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the water (Prevention & Control of Pollution) Act, 1974 from Uttar Pradesh Pollution Control Board before start of the plant.
7.	The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.	Unit will obtain authorization under the Hazardous and other Waste Management Rules, 2016 before start of the plant.
8.	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 Company will 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 will 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	24x7 continuous emission monitoring system is under installation and will be completed before the start of operation.

	(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. PM ₁₀ and PM _{2.5} in reference to PM emission, and SO ₂ and NO ₂ in reference to SO ₂ and NO ₂ 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).	As per the direction, unit has made arrangement for ambient air quality monitoring.
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.	Test reports of air quality are enclosed here with as enclosure 2.
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.	The unit will comply with the 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.	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826 (E) dated 16th November, 2009 is 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.	Unit shall use slop and coal/husk as a fuel. Coal will be used as fuel; not exceeding 0.5% Sulphur content. The gaseous emissions are 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.	Condition noted and complied.
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.	The storage of molasses shall be done in molasses storage tank; coal/rice husk is stored in covered sheds. Regular water sprinkling is done avoid dust pollution and 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.	Unit will install web camera at condensate polishing unit (CPU) with night vision capacity. Flow meters are to be installed.
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 (or will be) discharged outside the premises as unit is based on Zero Liquid Discharge.
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.	Process effluent/any wastewater will not mix with storm water. The storm water from the premises is collected and used with in 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.	Unit is based on Zero Liquid Discharge strategy; no effluent is discharged outside premises
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	Total fresh water requirement will not exceed the proposed quantity. Unit will obtain necessary permission from UPGWD as per

	in this regard.	U.P. Ground Water (Management and Regulation) Act 2019
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.	Waste water treatment strategy: For Spent wash: MEE followed by Incineration (Slop fired Boiler) For Other Effluent: Process Condensate Polishing Plant shall be installed for treatment of various other effluents (Condensate, Lees, Floor washing, Blow downs). Domestic effluent Soak pit and Septic tank.
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.	Condition noted, unit will do mandatory rain water harvesting.
IV.	Noise monitoring and prevention:	
1.	Acoustic enclosure shall be provided to DG set for controlling the noise pollution.	Acoustic enclosure is provided with 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.	The overall noise levels in and around the plant area is kept well within the standards as unit has provided 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.	The ambient noise levels conforms to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time. Test report enclosed as enclosure 2.
V.	Energy Conservation measures:	
1.	The energy sources for lighting purposes shall preferably be LED based.	The unit has preferred LED Lighting in the campus.

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.	Unit is following hazardous authorization issued by MOEF&CC.
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.	Ash shall be used as manure due to high potash value (27%-35%) For ash management unit will install granulation plant.
3.	The company shall undertake waste minimization measures as below: -	The unit has metered all necessary flow points.
	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.	Unit shall use concentration spent wash as fuel in boiler, treated water from CPU is 100% recycled within the system.
	iii. Use of automated filling to minimize spillage.	Condition noted.
	iv. Use of Close Feed system into batch reactors.	Unit shall use close feed system into batch reactors
	v. Venting equipment through vapour recovery system.	Unit has installed venting equipment through vapour recovery system.
vi. Use of high-pressure hoses for equipment clearing to reduce wastewater generation.	Unit has installed 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.	As unit is under commissioning and green belt is under development, unit has allocated 33% of green belt.
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.	Condition noted and Complied.
2.	The PP shall provide Personal Protection Equipment (PPE) as per the norms of	The unit has provided Personal Protection Equipment (PPE) as

	Factory Act.	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.	Training is imparted to all concerning employees on safety and health aspects of chemicals handling.
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.	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.	Occupation health surveillance of the workers is 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.	Unit has earmarked adequate space for parking of vehicles. Copy of the final layout depicting parking area.
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 1 st May, 2018, as applicable, regarding Corporate Environment Responsibility.	The project proponent will 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 approve 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	The company is having an environmental policy duly approve by the Board of Directors.

	/ conditions. The company shall have defined system of reporting infringements / deviation/ violation of the environmental/ forest / wildlife norms I 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 to the head of the organization.	The unit has organized a Environmental Cell to take care of all concerning stipulated conditions regarding environment.
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.	Condition noted
5.	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Condition noted for compliance.
X.	Miscellaneous:	
1.	If the proposed project is situated in notified area of ground water extraction, where creation of new wells for ground water extraction is not allowed, requirement of fresh water shall be met from alternate water source other than ground water or legally valid source and permission from the competent authority shall be obtained be to use it.	Condition Noted.
2.	The project proponent shall ensure that the distillery shall be on ZLD basis with	Waste water treatment strategy:

	incineration of spent wash in slop boiler. As proposed treated waste water should be completely recycled / reused and ZLD should be achieved. Under no circumstances treated waste water and effluent shall be discharged to any drain / sewer line / inland surface water / nala etc.	<p>For Spent wash: MEE followed by Incineration (Slop fired Boiler)</p> <p>For Other Effluent: Process Condensate Polishing Plant shall be installed for treatment of various other effluents (Condensate, Lees, Floor washing, Blow downs).</p> <p>Domestic effluent Soak pit and Septic tank. Unit is based on Zero Liquid Discharge strategy, no effluent is discharged outside premises</p>
3.	Directions/ suggestions given during public hearing and commitment made by the project proponent should be strictly complied.	Directions/ suggestions given during public hearing and commitment made by the project proponent are complied.
4.	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.	The copy of published information (in 2 newspapers) regarding grant of environmental clearance already submitted.
5.	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.	The copy of published information (in 2 newspapers) regarding grant of environmental clearance is already submitted The copies of the environment clearance letter are submitted to the Heads of local bodies Panchayat and Municipal bodies.
6.	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.	Condition noted for compliance.
7.	The project proponent shall monitor the	Unit is regularly monitoring the

	criteria pollutants level namely; PM ₁₀ , SO ₂ , NO ₂ (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.	ambient air quality, stack emissions; copy of the test reports is enclosed here with as enclosure 2 .
8.	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.	Condition noted.
9.	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.	Unit will submit environmental statement in Form-V as per schedule after start of the plant.
10.	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.	Unit will inform the same as per the said condition.
11.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	The unit strictly adheres to the stipulations made by the State Pollution Control Board and the State Government.
12.	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.	The unit abides by all the commitments and recommendations made in the EIA/EMP report.
13.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate	No further expansion or modifications in the plant will be carried out without prior approval of the Ministry of

	Change (MoEF&CC).	Environment, Forests and Climate Change (MoEF&CC).
14.	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.	No any Concealing of factual data has been done.
15.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Condition noted.
16.	The Ministry reserves the right to stipulate additional conditions if found necessary.	Condition noted.
17.	The Company in a time bound manner shall implement these conditions.	Condition noted.
18.	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.	Condition noted.
19.	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.	Condition noted.
20.	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.	
	Concealing factual data and information or submission of false/fabricated data and failure to comply with any of the	No any Concealing of factual data or submission of false/fabricated data has been done.

	<p>conditions stipulated in the prior Environmental Clearance attract action under the provision of Environmental (Protection) Act, 1986.</p>	
	<p>This Environmental Clearance is subject to ownership of the site by the project proponent in confirmation with approved master plan for Lucknow. In case of violation; it would not be effective and would automatically be stand cancelled.</p>	<p>Condition noted.</p>
	<p>The project proponent has to ensure that the proposed site in not a part of any no-development zone as required/prescribed/identified 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.</p>	<p>The unit ensures that the proposed site in not a part of any no-development zone</p>
	<p>The project proponent has mandatorily submit the compliance of specific conditions no.-1, 2, 3, 4, & 5 given In E.C. letter within 3 months, falling which the clearance shall automatically deemed to be cancelled.</p>	<p>Condition noted and complied.</p>
	<p>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).</p>	<p>Condition noted for compliance.</p>
	<p>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 amendment and rules made thereafter.</p>	<p>Unit abides by 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 amendment and rules made thereafter.</p>

Chapter-2 Details of Environmental Monitoring

2.1 AMBIENT AIR QUALITY MONITORING

2.1.1 Ambient air Quality Monitoring Stations

Ambient air quality monitoring has been carried out at 1 location; near project site. This will enable to have a comparative analytical understanding about air quality and the changes in the air environment in the study area with respect to the condition prevailing. The location of the ambient air quality monitoring stations is given in Table 2.1:

Table 2.1 Details of Ambient Air Quality Monitoring Stations

S. No	Location Code	Location Name/Description
i.	AAQ-1	Near Project Site

AAQ-1: Near Project Site

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

2.1.2 Ambient Air Quality Monitoring Methodology

Monitoring was conducted in respect of the following parameters:

- Particulate Matter 2.5 (PM_{2.5})
- Particulate Matter 10 (PM₁₀)
- Sulphur Dioxide (SO₂)
- Oxides of Nitrogen (NO₂)

The duration of sampling of PM_{2.5}, PM₁₀, SO₂ and NO₂ was 24 hourly continuous sampling per day and CO was sampled for 8 hours continuous, thrice in 24-hour 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 Central Pollution Control Board (CPCB) and IS: 5182. The techniques used for ambient air quality monitoring and minimum detectable levels are given in **Table 2.2**.

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 NO₂.

Table 2.2 Techniques used for Ambient Air Quality Monitoring

S. No.	Parameter	Technique
1.	Particulate Matter 2.5	Fine Particulate Sampler, Gravimetric Method
2.	Particulate Matter 10	Respirable Dust Sampler, with cyclone separator, Gravimetric Method
3.	Sulphur dioxide	Modified West and Gaeke
4.	Oxides of Nitrogen	Jacob & Hochheiser

Ambient Air Quality Monitoring Results at Near Project Site

The detailed on-site monitoring results of PM_{2.5}, PM₁₀, SO₂ and NO_x are presented in Table 2.3.

Table 2.3 Ambient Air Quality Monitoring Results

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	80.5	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	48.71	2.0 - 500	For 24 hour =60
3	Sulphur Dioxide (SO ₂)	IS: 5182 (Part-2): 2001 Reaffirmed: 2017	µg/m ³	14.36	5.0 - 1050	For 24 hour =80
4	Nitrogen Dioxide (NO ₂)	IS: 5182 (Part-6): 2006 Reaffirmed: 2017	µg/m ³	19.52	6.0 - 750	For 24 hour =80

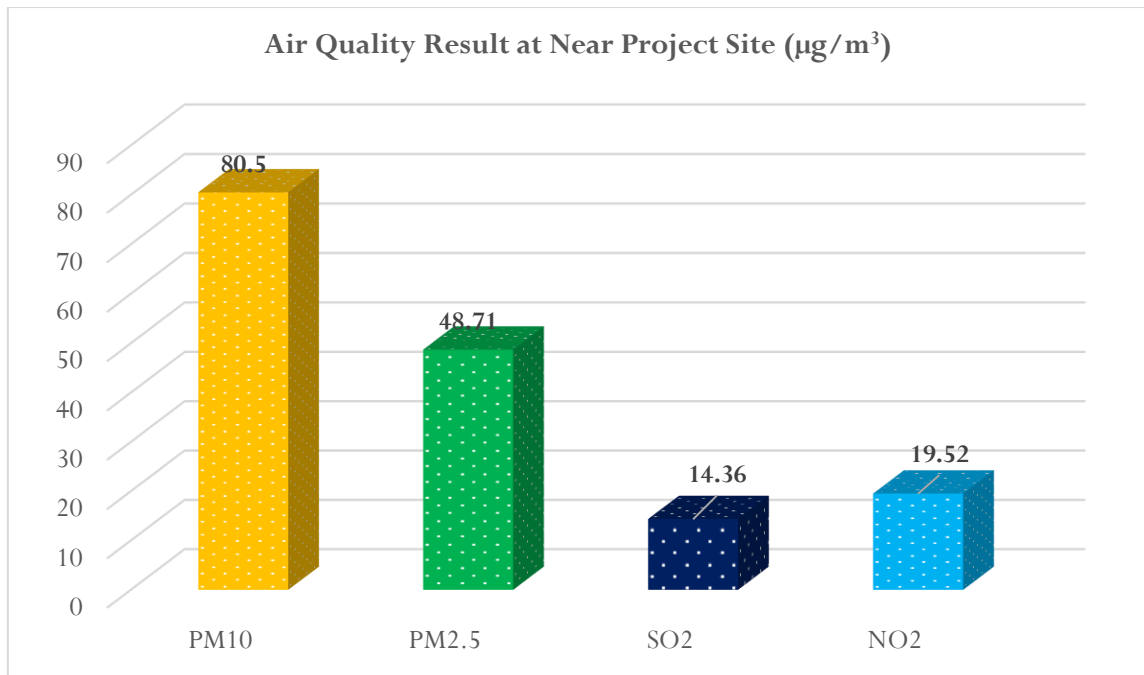


Figure 1.1: Air Quality at Near Project Site

2.2 AMBIENT NOISE MONITORING

2.2.1 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 construction allied 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 1 location as given in **Table 2.4**.

Table 2.4 Details of Ambient Noise Monitoring Stations

S. No	Location Code	Location name and description
1.	N1	Near Project Site

2.2.2 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.

2.2.3 Ambient Noise Monitoring Results

The location wise ambient noise monitoring results is summarized in **Table 2.5**. The location-wise variation of noise levels are graphically presented in **Figure 1.2**.

Table 2.5 Ambient Noise Monitoring Results

Ambient Noise Level				
Sr. No.	Parameter	Unit	March 2021	
			Results DAY TIME (6:00 AM – 10:00 PM)	Results NIGHT TIME (10:00 PM – 6:00 AM)
1	Equivalent sound level	dB(A)	61.54	48.25

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

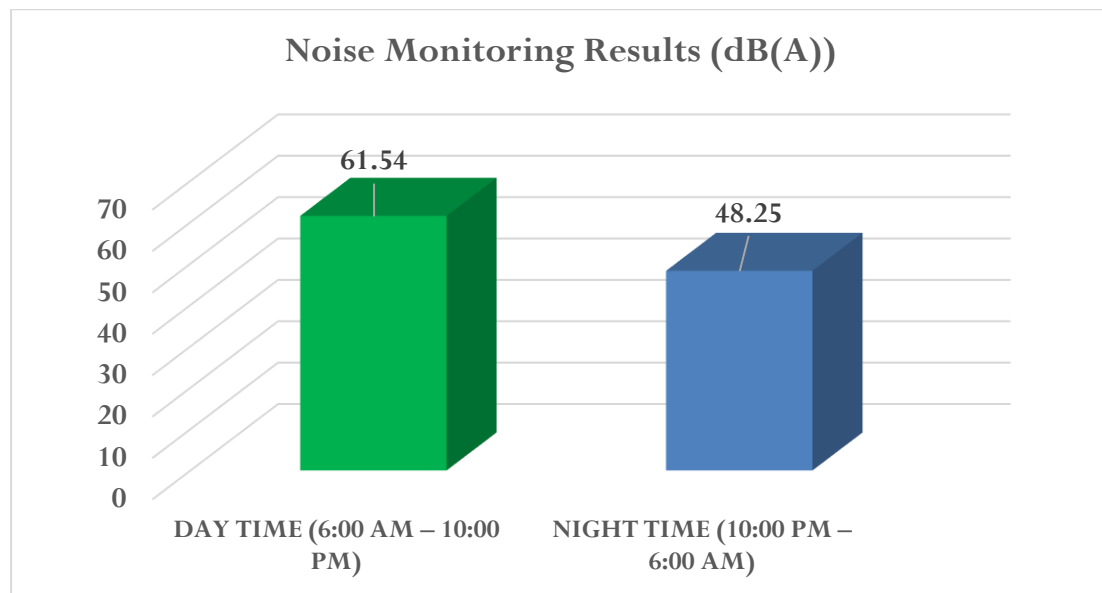


Figure 1.2: Day and Night Time noise Level at Factory Site

2.2.4 Discussion on Ambient Noise Levels in the Study Area

Day Time Noise Levels (L_{day}):

The day time noise level at all the locations were found to within limits prescribed for industrial area i.e. 75 db (A).

Night Time Noise Levels (L_{night}):

The night time noise level at all the locations were found to within limit prescribed for industrial area i.e. 70 dB (A).

2.3 GROUND WATER QUALITY MONITORING

2.3.1 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 2.6**.

Table 2.6 Details of Water Quality Monitoring Station

S. No	Location Code	Location name and description
1.	GW1	Borewell Near Project Site (Borewell)

2.3.2 Methodology of ground water Quality Monitoring

Sampling of ground water was carried out on April to September. 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 (SOP) 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 2.7**.

2.3.3 Ground water Quality Monitoring Results

The detailed Ground water quality monitoring results are presented in **Table 2.7 and 2.12**.

Table 2.7 Ground water Quality Monitoring Results at Borewell near Project Site April 2021

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-4): 1983 Reaffirmed: 2017	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 23 rd Ed. 2017-4500 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): 1984 Reaffirmed: 2017	404.2	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 23 rd Ed. 2017-4500-NH ₃ F	BDL	0.5 - 2	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 23 rd Ed. 2017-5540 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 23 rd Ed. 2017-3500 Mg. B	30.13	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 23 rd Ed. 2017-4500-Cl B	26.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 23 rd Ed. 2017-4500 F C	0.32	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 23 rd Ed. 2017-5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 23 rd Ed. 2017-4500- SO ₄ ²⁻	24.02	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2320 B	284.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2340 C	256.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2

19	Boron as B	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.11	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.05	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.66	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23 rd Ed. 2017-3120 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	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	<i>T. coli</i>	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

Table 2.8 Ground water Quality Monitoring Results at Borewell near Project Site May 2021

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-4): 1983 Reaffirmed: 2017	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 23 rd Ed. 2017-4500 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): 1984 Reaffirmed: 2017	398.2	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 23 rd Ed. 2017-4500-NH ₃ F	BDL	0.5 - 2	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 23 rd Ed. 2017-5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	51.2	2.0 - 600	75	200
9	Magnesium	mg/l	APHA 23 rd Ed. 2017-	33.96	0.1 - 200	30	100

	as Mg		3500 Mg, B				
10	Chloride as Cl	mg/l	APHA 23 rd Ed. 2017-4500-Cl B	26.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 23 rd Ed. 2017-4500 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 23 rd Ed. 2017-5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 23 rd Ed. 2017-4500- SO ₄ ²⁻	28.4	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2320 B	296.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2340 C	276.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.11	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.05	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.81	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23 rd Ed. 2017-3120 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	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	<i>T. coli</i>	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

Table 2.9 Ground water Quality Monitoring Results at Borewell near Project Site June 2021

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-4): 1983 Reaffirmed: 2017	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 23 rd Ed. 2017-4500 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): 1984 Reaffirmed: 2017	412.0	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 23 rd Ed. 2017-4500-NH ₃ F	BDL	0.5 - 2	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 23 rd Ed. 2017-5540 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 23 rd Ed. 2017-3500 Mg, B	30.13	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 23 rd Ed. 2017-4500-Cl B	22.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 23 rd Ed. 2017-4500 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 23 rd Ed. 2017-5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 23 rd Ed. 2017-4500- SO ₄ ²⁻	16.82	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2320 B	288.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2340 C	260.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.11	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.39	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23 rd Ed. 2017-3120 B	BDL	0.01 - 10	0.01	No Relaxation

			(ICP-OES)				
26	Mercury as Hg	µg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23 rd Ed. 2017-3120 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	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	<i>T. coli</i>	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

Table 2.10 Ground water Quality Monitoring Results at Borewell near Project Site July 2021

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-4): 1983 Reaffirmed: 2017	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 23 rd Ed. 2017-4500 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): 1984 Reaffirmed: 2017	422.0	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 23 rd Ed. 2017-4500-NH ₃ F	BDL	0.5 - 2	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 23 rd Ed. 2017-5540 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 23 rd Ed. 2017-3500 Mg, B	31.10	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 23 rd Ed. 2017-4500-Cl B	32.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 23 rd Ed. 2017-4500 F C	0.40	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 23 rd Ed. 2017-5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 23 rd Ed. 2017-4500- SO ₄ ²⁻	26.8	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2320 B	284.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2340 C	264.0	5.0 - 800	200	600

18	Aluminium as Al	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.09	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.07	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.66	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23 rd Ed. 2017-3120 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	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	<i>T. coli</i>	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

Table 2.11 Ground water Quality Monitoring Results at Borewell near Project Site August 2021

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-4): 1983 Reaffirmed: 2017	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 23 rd Ed. 2017-4500 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): 1984 Reaffirmed: 2017	412.0	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 23 rd Ed. 2017-4500-NH ₃ F	BDL	0.5 - 2	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 23 rd Ed. 2017-5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991	57.6	2.0 - 600	75	200

			Reaffirmed: 2019				
9	Magnesium as Mg	mg/l	APHA 23 rd Ed. 2017-3500 Mg, B	34.02	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 23 rd Ed. 2017-4500-Cl- B	26.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 23 rd Ed. 2017-4500 F- C	0.39	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 NO₃	mg/l	IS: 3025 (Part-34): 1986 Reaffirmed: 2019	BDL	1.0 - 70	45	No Relaxation
14	Phenolic Compound (as C₆H₅OH)	mg/l	APHA 23 rd Ed. 2017-5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO₄	mg/l	APHA 23 rd Ed. 2017-4500- SO ₄ ²⁻	20.46	1.0 - 500	200	400
16	Alkalinity as CaCO₃	mg/l	APHA 23 rd Ed. 2017-2320 B	300.0	2.0 - 1000	200	600
17	Total Hardness as CaCO₃	mg/l	APHA 23 rd Ed. 2017-2340 C	284.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.10	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.04	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.42	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23 rd Ed. 2017-3120 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	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	<i>T. coli</i>	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

Table 2.12 Ground water Quality Monitoring Results at Borewell near Project Site September 2021

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-4): 1983 Reaffirmed: 2017	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 23 rd Ed. 2017-4500 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): 1984 Reaffirmed: 2017	418.6	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 23 rd Ed. 2017-4500-NH ₃ F	BDL	0.5 - 2	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 23 rd Ed. 2017-5540 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 23 rd Ed. 2017-3500 Mg, B	34.02	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 23 rd Ed. 2017-4500-Cl B	30.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 23 rd Ed. 2017-4500 F C	0.35	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 23 rd Ed. 2017-5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 23 rd Ed. 2017-4500- SO ₄ ²⁻	28.4	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2320 B	288.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2340 C	272.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5
21	Iron as Fe	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.11	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.06	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.69	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23 rd Ed. 2017-3120 B	BDL	0.01 - 10	0.01	No Relaxation

			(ICP-OES)				
26	Mercury as Hg	µg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23 rd Ed. 2017-3120 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	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	<i>T. coli</i>	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

2.4 SOIL MONITORING

2.4.1 Soil Monitoring Locations

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

To assess impacts of on project 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 2.13**.

Table 2.13 Details of Soil Monitoring Stations

S. No	Location Code	Location name and description
1.	S1	Near Project Site

2.4.2 Methodology of Soil Monitoring

The sampling has been done in line with IS: 2720 & Methods of Soil Analysis, ETRC Lab SOP. 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, 2021.

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.

2.4.3 Soil Monitoring Results

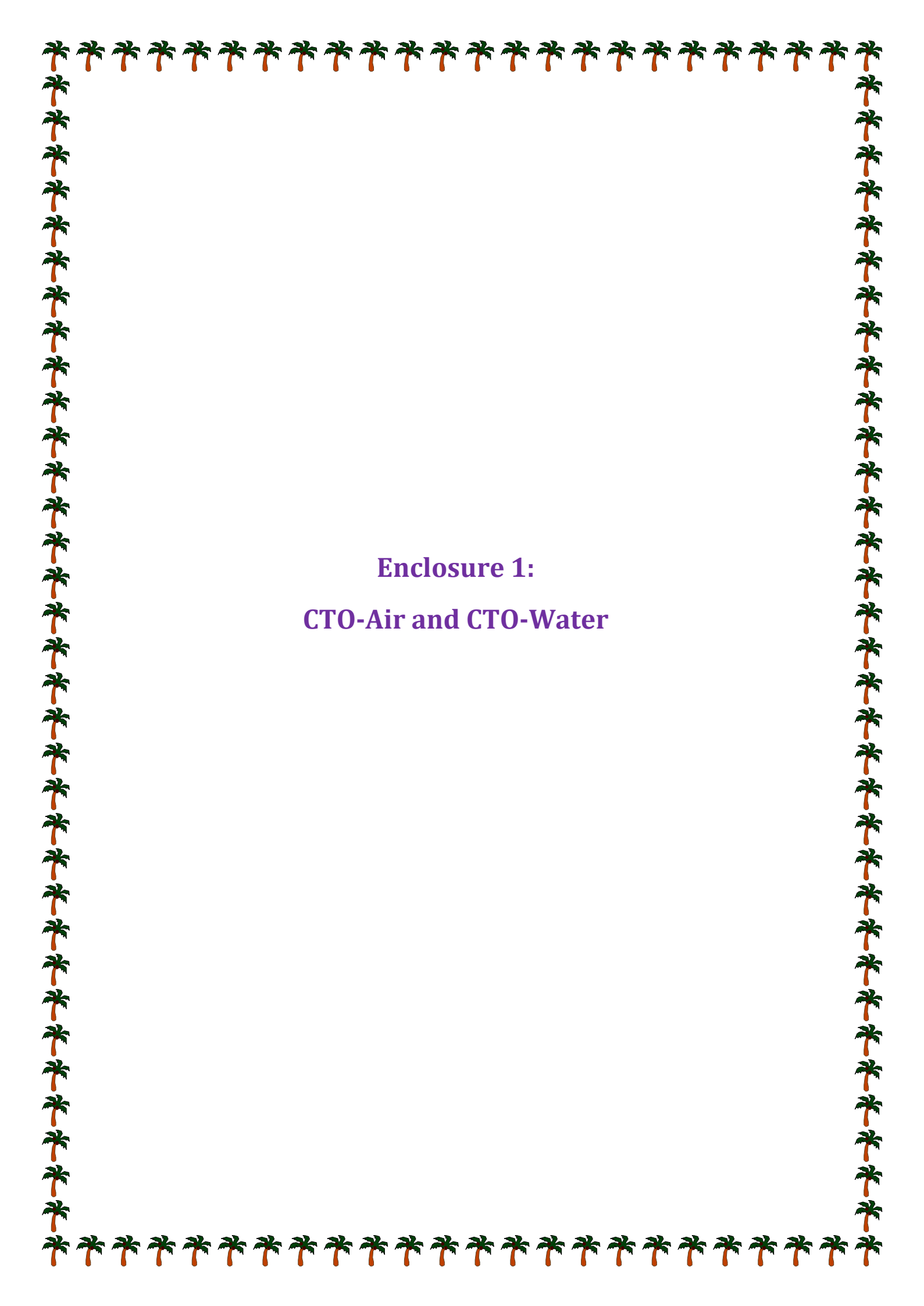
Single sample of soil is collected from the site to check the quality of soil of the study area. The Physico-chemical characteristics of the soil, as obtained from the analysis of the soil sample, are presented in **Table 2.14**.

Table 2.14 Physico-Chemical Characteristics of Soil at Near Factory Premises September, 2021

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	(μ mhos/cm)	IS: 14767:2000, Reaffirmed 2016	312.0	1.0 - 40000
3	Moisture content	%	IS: 2720 (Part -2): 1973 Reaffirmed: 2015	3.20	1.0 - 50
4	Sulphur	Kg/Hec	IS: 14685: 1999 Reaffirmed: 2014	13.56	5.0 - 100
5	Boron	mg/kg	ETRC/ LABSOPS/06, ISSUE NO.1 Dated 10.08.2015	BDL	4.0 - 100
6	Copper	mg/kg	ETRC/ LABSOPS/07, ISSUE NO.1 Dated 10.08.2015	0.37	0.3 - 500
7	Zinc	mg/kg	ETRC/ LABSOPS/08, ISSUE NO.1 Dated 10.08.2015	1.52	1.0 - 500
8	Iron	mg/kg	ETRC/ LABSOPS/09, ISSUE NO.1 Dated 10.08.2015	12.98	5.0 - 500
9	Manganese	mg/kg	ETRC/ LABSOPS/10, ISSUE NO.1 Dated 10.08.2015	7.2	5.0 - 500

2.4.4 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.

A decorative border consisting of a repeating pattern of palm trees, arranged in a rectangular frame around the page. The palm trees are green with brown trunks and are spaced evenly along all four sides of the page.

Enclosure 1:
CTO-Air and CTO-Water



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

CONSENT ORDER

Ref No. -
125510/UPPCB/MuzaffarNagar(UPPCBRO)/CT
O/water/MUZAFFARNAGAR/2021

Dated : 07/06/2021

To ,

Shri M/s Indian Potash Limited (Distillery Unit)

M/s M/s Indian Potash Limited (Distillery Unit)

Rohana Kalan, Village Bahedi, P.O. Rohana Mill, Block Charthawal, Tehsil and District :

Muzaffarnagar (U.P.)

MUZAFFARNAGAR

Sub : Consent under Section 25/26 of The Water (Prevention and control of Pollution) Act, 1974 (as amended) for discharge of effluent to M/s. M/s Indian Potash Limited (Distillery Unit)

Reference Application No :11887558

Dated :07/06/2021

1. For disposal of effluent into water body or drain or land under The Water (Prevention and control of Pollution) Act,1974 as amended (here in after referred as the act) M/s. M/s Indian Potash Limited (Distillery Unit) is hereby authorized by the board for discharge of their industrial effluent generated through ETP for irrigation/river through drain and disposal of domestic effluent through septic tank/soak pit subject to general and special conditions mentioned in the annexure ,in refrence to their foresaid application .
2. This consent is valid for the period from 27/03/2021 to 31/12/2022 .
3. In spite of the conditions and provisions mentioned in this consent order UP Pollution Control Board reserves its right and powers to reconsider/amend any or all conditions under section 27(2) of the Water (Previntion and Controt of Pollution) Act, 1974 as amended .

This consent is being issued with the permission of competent authority .

For and on behalf of U.P. Pollution Control Board

Nishi Kumar Chauhan
Digitally signed by Nishi Kumar
Chauhan
Date: 2021.06.07 12:04:23 +05'30'
Chief Environmental Officer,
Circle-3

Enclosed : As above
(condition of consent):

Copy to: Regional Officer, U.P. Pollution Control Board, Muzaffarnagar.

Nishi Kumar Chauhan
Digitally signed by Nishi Kumar
Chauhan
Date: 2021.06.07 12:04:36 +05'30'
Chief Environmental Officer,
Circle-3

U.P. POLLUTION CONTROL BOARD, LUCKNOW

Annexure to Consent issued to M/s.M/s Indian Potash Limited (Distillery Unit) vide

Consent Order No. 11887558/ Water

Dated : 07/06/2021

CONDITIONS OF CONSENT

1. This consent is valid only for the approved production capacity of Rectified Spirit, ENA and Absolute Alcohol- 65.3 KL/Day and Co-Gen 2 MW.
2. The quantity of maximum daily effluent discharge should not be more than the following :

Effluent Discharge Details			
S.No	Kind of Effluent	Maximum daily discharge, KL/day	Treatment facility and discharge point
1	Domestic	12	Septic Tank
2	Industrial	ZLD	ETP

3. Arrangement should be made for collection of water used in process and domestic effluent separately in closed water supply system. It should be ensured that domestic effluent should not be discharged in storm water drain.
- 4(a) The domestic effluent should be treated in treatment plant so that the treated effluent should be in conformity with the following norms.

Domestic Effluent		
S.No	Parameter	Standard
1	Total Suspended Solids	As per EPA Rules 1986
2	BOD	As per EPA Rules 1986
3	COD	As per EPA Rules 1986
4	Oil & Grease	As per EPA Rules 1986
5	Quantity of Discharge	12 KLD

5. The other pollutant for which norms have not been prescribed, the same should not be more than the norms prescribed for the water used in manufacturing process of the industry.
6. The method for collecting industrial and domestic effluent and its analysis should be as per legal Indian standards and its subsequent amendments/standards prescribed under the Environment (Protection) Act, 1986.
7. The industry shall not discharge any trade effluent outside the premises and Zero Liquid Discharge (ZLD) shall be maintained all the time.
8. Molasses shall not be stored in kachcha pits.
9. If UPPCB or CPCB issues closure order against the industry, this consent shall remain suspended for the period till closure order is revoked, after which the consent will be effective again for the remaining period.
10. The unit should be operated in such a way so that there is no adverse impact on public and environment.
11. Unit must maintain on line connectivity of mass flow meters at the inlet and outlet of MEE and web cameras installed at the final outlet, MEE and Bio Compost yard and connected with server of CPCB and UPPCB.
12. The unit shall ensure deployment of qualified staff for self monitoring mechanism on 24 X7 hours basis.
13. Volume of spent wash shall be reduced to 40 % minimum and solid concentration shall be maintained minimum 30% at the outlet of MEE.
14. Unit shall identify recipient drains/rivulets and their upstream & downstream locations in consultation with UPPCB and shall carry out monthly monitoring of identified recipient drains at upstream & downstream location through recognized lab under Environment (Protection) Act, 1986 and shall submit the analysis report on monthly basis by 10th of every month to CPCB and UPPCB.

15. 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 in case of incineration boiler and 30 days equivalent of production in case of bio composting.
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 ensure to send monthly reports regarding spent wash storage and details of spent wash in each lagoon constructed in industry.
18. The Unit will file the renewal application at least 2 months prior to the expiry of this Order.

Specific Conditions:

- 1- The unit shall maintain strict supervision upon fluctuations in operating parameters with respect to each treatment unit of the Effluent treatment plant
- 2- The E.T.P. unit operation line up Strengthening is to be maintained.
- 3- The Unit shall install Piezometer for measurement of ground water level and the data generated from Piezometer will be provided to the SPCB on monthly basis.
- 4- No effluent is allowed to discharge outside factory premises.
- 5- Flow meter to be installed in all water abstraction points and usage of fresh water to be minimized.
- 6- The industry will submit the permission from the State Ground Water Authority within 03 month, failing which consent shall be deemed automatically cancelled.
- 7- The unit shall submit the audited balance sheet for the current year and the details of fees deposited during last three years within a month.
- 8- Industry shall abide by orders / directions issued by Hon'ble Supreme court Hon'ble High Court, Hon'ble National Green tribunal, Central Pollution Control Board and U.P Pollution Control Board for protection and safe guard of environment from time to time.
- 9- Industry shall comply with various provisions of Air (Prevention and Control of Pollution) Act 1981 as amended, Water (Prevention and Control of Pollution) Act 1974 as amended and all other applicable rules notified under E.P. Act 1986.
- 10- If UPPCB or CPCB issues closure order against the industry, this consent shall remain suspended for the period till closure order is revoked, after which the consent will be effective again for the remaining period.
- 11- The water for industrial process in the industry should be supplied from the purified effluent and condensate water generated from sugar mill and surface water of canal only.
- 12- This consent is valid for the production capacity of Rectified Spirit, ENA and Absolute Alcohol- 65.3 KL/Day and Co-Gen 2 MW.
- 13- This consent is valid only for Zero Liquid Discharge (ZLD). Bio Composting shall not be done in the industry. The generated spent wash shall be completely used in the Slope Boiler as a fuel.
- 14- In the crushing season of the sugar unit the generated effluent from the sugar unit shall be used after treatment in the Distillery unit.
- 15- Minimum 33% of the land on which industry is established will be covered by the plantation of tall trees of suitable species as per the guidelines set up by the Board vide its Office Order no.H-16405/220/2018/02 dt. 16/02/2018. The copy of this guideline is available at URL http://www.uppcb.com/pdf/Green-Belt-Guidle_160218.pdf.

Issued with the permission of competent authority .

For and on behalf of U.P. Pollution Control Board .

Nishi Kumar Chauhan Digitally signed by Nishi Kumar Chauhan
Date: 2021.06.07 12:04:51 +05'30'

**Chief Environmental Officer,
Circle-3**



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

CONSENT ORDER

Ref No. -
125544/UPPCB/MuzaffarNagar(UPPCBRO)/CTO/air/MUZAFFARN
AGAR/2021

Dated : 07/06/2021

To ,

Shri M/s Indian Potash Limited (Distillery Unit)

M/s M/s Indian Potash Limited (Distillery Unit)

Rohana Kalan, Village Bahedi, P.O. Rohana Mill, Block Charthawal, Tehsil and District :

Muzaffarnagar (U.P.)

MUZAFFARNAGAR

Sub : Consent under section 21/22 of the Air (Prevention and control of Pollution) Act, 1981 (as amended) to M/s. M/s Indian Potash Limited (Distillery Unit)

Reference Application No. 11890823

Dated : 07/06/2021

1. With reference to the application for consent for emission of air pollutants from the plant of M/s M/s Indian Potash Limited (Distillery Unit) . under Air Act 1981. It is being authorised for said emissions, as per the standards, in environment, by the Board as per enclosed conditions .
2. This consent is valid for the period from 27/03/2021 to 31/12/2022 .
3. In spite of the conditions and provisions mentioned in this consent order UP Pollution Control Board reserves its right and powers to reconsider/amend any or all conditions under section 21 (6) of the Air (Prevention and Control of Pollution) Act, 1981 as amended.
This consent is being issued with the permission of competent authority .

For and on behalf of U.P. Pollution Control Board

Nishi Kumar Chauhan
Digitally signed by Nishi Kumar
Chauhan
Date: 2021.06.07 12:05:11 +05'30'
Chief Environmental Officer,
Circle-3

Enclosed : As above
(condition of consent):

Copy to: Regional Officer, U.P. Pollution Control Board, Muzaffarnagar.

Nishi Kumar Chauhan
Digitally signed by Nishi Kumar Chauhan
Date: 2021.06.07 12:05:24 +05'30'
Chief Environmental Officer,
Circle-3

U.P. Pollution Control Board

Dated : 07/06/2021

CONDITIONS OF CONSENT

- 1(a). The details of Air pollution sources and stacks attached with Boiler

Air Pollution Source Details					
S.No	Air Pollution Source	Type of Fuel	Stack No.	Parameters	Height
1	22 TPH Slop Fired Boiler	Slop/Coal/Rice Husk	1	Particulate Matter	70 Meter From Ground Level

- 1(b) The emissions by various stacks into the environment should be as per the norms of the Board .

Emission Quality Details Detail			
S.No	Stack No	Parameter	Standard
1	1	Particulate Matter	As per EPA Rules 1986

- The equipment for air pollution control system and monitoring, as proposed by the industry and approved by the Board should be installed in their premises itself.
- Industry shall dispose the incineration boiler ash in such a manner so that there should not be any adverse impact on public health at large and on Soil, Water & Air environment.
- The modification or installation in the existing pollution control equipment shall be done only by prior approval of the Board.
- The operation of air pollution control system and maintenance be done in such a way that the quantity of pollutants shall be in accordance with the standards prescribed by the Board/MoEF& CC/or otherwise mandatory.
- Unit shall do provisions for control of fugitive emissions from process as per the norms of the Board/MOEF & CC/or otherwise mandatory.
- The unit shall submit the stack emissions monitoring report within one month from issuance of consent order along with the point wise compliance report of the consent order. Further quarterly monitoring report analysed by Board/NABL accredited laboratory shall be submitted.
- In case of closure directions under section-5 of E (P) Act, 1986 issued by CPCB, this consent will be automatically suspended during the closure period, and will be automatically reinstated with specific conditions as per CPCB revocation orders.
- Industry shall develop and maintain green belt as per the guidelines issued by the Board vide office order dated 16/02/2018, which is available on Board's Website- www.uppcb.com.
- 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.
- Industry shall abide by orders / directions issued by Hon'ble Supreme court, Hon'ble High Court, Hon'ble National Green tribunal, Central Pollution Control Board and U.P Pollution Control Board for protection and safe guard of environment from time to time.

The Unit will file the renewal application at least 2 months prior to the expiry of this Order.

Specific Conditions:

1. The industry should be operated in such a manner that it does not adversely affect the environment and the solid waste generated such as ash etc. is disposed in eco friendly manner.
2. Any source of emission other than that mentioned in the Air consent seeking application will not be permitted by the Board.
3. The industry should ensure the operation of the air pollution control system (APCS) in such a manner that the air emission conforms with the standards prescribed under the E.P Act 1986 as amended.
4. Industry shall submit Environmental Statement in prescribed format as per rule no.14 as per E.P Rules 1986.
5. This consent is valid only for products and quantity mentioned above. Industry shall obtain prior approval before making any modification in product/ process /fuel/ plant machinery failing which consent would be deemed void.
6. Industry shall abide by orders/ directions issued by Hon'ble Supreme court Hon'ble High Court, Hon'ble National Green tribunal, Central Pollution Control Board and U.P Pollution Control Board for protection and safe guard of environment from time to time.
7. Industry shall submit monthly monitoring reports of all stacks and ambient air quality from a certified / approved laboratory under E.P. Act 1986.
8. Industry shall comply with various provisions of Air (Prevention and Control of Pollution) Act 1981 as amended, Water (Prevention and Control of Pollution) Act 1974 as amended and all other applicable rules notified under E.P. Act 1986.
9. The unit shall submit the audited balance sheet for the current year and the details of fees deposited during last three years within a month.
10. The unit shall obtain prior consents in the event of any addition of new emission generation sources such as- Boiler/ Furnace/ Heaters/ D.G. Sets or alteration of existing emission sources in accordance with section- 21/22 of air Act 1981 (as amended respectively).
11. This Consent order shall automatically become invalid on issuance of Closure Order by C.P.C.B / UPPCB and further on revoking of Closure order, the Consent order shall become valid.
12. The Industry will use minimum 20% Bio Briquette as fuel in the Boiler depending upon its availability.
13. In compliance with the Hon'ble Supreme Court order passed in W.P. (civil) No. 13029/1985 M.C. Mehta Vs. Union of India and ors. the use of Pet coke and furnace oil is prohibited.
14. The unit shall submit the point wise compliance report of the conditions imposed in the N.O.C issued by the Board for the expansion of the industry within a month.
15. The use of Pet coke and Furnace oil as a fuel in the factory is restricted in compliance of the Hon'ble Supreme court order.
16. This consent is valid for the production capacity of Rectified Spirit, ENA and Absolute Alcohol- 65.3 KL/Day and Co-Gen 2 MW.
17. Minimum 33% of the land on which industry is established will be covered by the plantation of tall trees of suitable species as per the guidelines set up by the Board vide its Office Order no.H-16405/220/2018/02 dt. 16/02/2018. The copy of this guideline is available at URL http://www.uppcb.com/pdf/Green-Belt-Guidle_160218.pdf.

Issued with the permission of competent authority .

For and on behalf of U.P. Pollution Control Board .

Nishi Kumar Chauhan

Digitally signed by Nishi Kumar
Chauhan
Date: 2021.06.07 12:05:39 +05'30'

Chief Environmental Officer,

Circle-3

A decorative border consisting of a repeating pattern of palm trees with green fronds and brown trunks, arranged in a rectangular frame around the page.

Enclosure 2:
Test Reports

SIX MONTHLY
COMPLIANCE REPORT
(April, 2021 to September-2021)

Ambient Air : September, 2021
Ambient Noise Monitoring : September, 2021
Ground Water : April, 2021 to September, 2021
Soil Quality : September, 2021

of

M/s Indian Potash Limited
Unit: Rohana Kalan (Distillery Division)
P.O.: Rohana Mill, Block: Charthawal
Tehsil: Muzaffarnagar
District: Muzaffarnagar (U.P.) - 2512023



ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE

Office & Laboratory: 2/261, Vishwas Khand, Gomti Nagar, Lucknow- 226 010 (U.P.)

Email : ETRCLTH@YAHOO.IN, Web: www.etrccindia.com

ISO 9001:2015, ISO 14001 : 2015, OHSAS 18001 : 2007

An Approved Laboratory from Ministry of Environment, Forest and Climate change, Govt. of India under EPA 1986

ETRC/PM14/TEST-REP/FT/17

TEST REPORT WATER ANALYSIS

Test Report Ref No.: ETRC/EPA/4372/2021	Date of Report : 21/04/2021
Name /Address/Type of Industry	M/s Indian Potash Limited Unit: Rohana Kalan (Distillery Division) P.O.: Rohana Mill, Block: Charthawal Tehsil: Muzaffarnagar District: Muzaffarnagar (U.P.) - 251202

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	Borewell (Near Project Site)	6	Sample Collected By	Industry Self
3	Sample received date	17.04.2021	7	Analysis Start Date	17.04.2021
4	Sample Quantity	5.0 liters	8	Analysis End Date	20.04.2021

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-4): 1983 Reaffirmed: 2017	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 23 rd Ed. 2017-4500 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): 1984 Reaffirmed: 2017	404.2	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 23 rd Ed. 2017-4500-NH ₃ F	BDL	0.5 - 2	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 23 rd Ed. 2017-5540 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 23 rd Ed. 2017-3500 Mg, B	30.13	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 23 rd Ed. 2017-4500-Cl ⁻ B	26.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 23 rd Ed. 2017-4500 F ⁻ C	0.32	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 23 rd Ed. 2017-5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 23 rd Ed. 2017-4500- SO ₄ ²⁻	24.02	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2320 B	284.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2340 C	256.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5



ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE

Office & Laboratory: 2/261, Vishwas Khand, Gomti Nagar, Lucknow- 226 010 (U.P.)

Email : ETRCLTH@YAHOO.IN, Web: www.etrccindia.com

ISO 9001:2015, ISO 14001 : 2015, OHSAS 18001 : 2007

An Approved Laboratory from Ministry of Environment, Forest and Climate change, Govt. of India under EPA 1986


Test Report Ref No.: ETRC/EPA/4372/2021

21	Iron as Fe	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.11	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.05	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.66	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23 rd Ed. 2017-3120 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	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

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

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
- The result relate only to the items tested.
- ETRC does not assume any liability for any claims or damages related to the quality of parameter analyzed in the results and/or the performance of the equipment constituting to the results.
- All disputes subject to Lucknow jurisdiction.
- This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without our special permission in writing.
- Complain register is available in our laboratory.


Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge




Authorized Signatory
(Ritu Garg)
QM



ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE

Office & Laboratory: 2/261, Vishwas Khand, Gomti Nagar, Lucknow- 226 010 (U.P.)

Email : ETRCLTH@YAHOO.IN, Web: www.etrccindia.com

ISO 9001:2015, ISO 14001 : 2015, OHSAS 18001 : 2007

An Approved Laboratory from Ministry of Environment, Forest and Climate change, Govt. of India under EPA 1986

ETRC/PM14/TEST-REP/FT/17

TEST REPORT WATER ANALYSIS

Test Report Ref No.: ETRC/EPA/4391/2021	Date of Report : 18/05/2021
Name /Address/Type of Industry	M/s Indian Potash Limited Unit: Rohana Kalan (Distillery Division) P.O.: Rohana Mill, Block: Charthawal Tehsil: Muzaffarnagar District: Muzaffarnagar (U.P.) - 251202

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	Borewell (Near Project Site)	6	Sample Collected By	Industry Self
3	Sample received date	12.05.2021	7	Analysis Start Date	12.05.2021
4	Sample Quantity	5.0 liters	8	Analysis End Date	17.05.2021

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-4): 1983 Reaffirmed: 2017	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 23 rd Ed. 2017-4500 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): 1984 Reaffirmed: 2017	398.2	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 23 rd Ed. 2017-4500-NH ₃ F	BDL	0.5 - 2	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 23 rd Ed. 2017-5540 C	BDL	0.05 - 0.5	0.2	1.0
8	Calcium as Ca	mg/l	IS: 3025 (Part-40): 1991 Reaffirmed: 2019	51.2	2.0 - 600	75	200
9	Magnesium as Mg	mg/l	APHA 23 rd Ed. 2017-3500 Mg, B	33.96	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 23 rd Ed. 2017-4500-Cl ⁻ B	26.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 23 rd Ed. 2017-4500 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 23 rd Ed. 2017-5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 23 rd Ed. 2017-4500- SO ₄ ²⁻	28.4	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2320 B	296.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2340 C	276.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5



ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE

Office & Laboratory: 2/261, Vishwas Khand, Gomti Nagar, Lucknow- 226 010 (U.P.)

Email : ETRCLTH@YAHOO.IN, Web: www.etrccindia.com

ISO 9001:2015, ISO 14001 : 2015, OHSAS 18001 : 2007

An Approved Laboratory from Ministry of Environment, Forest and Climate change, Govt. of India under EPA 1986


Test Report Ref No.: ETRC/EPA/4391/2021

21	Iron as Fe	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.11	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.05	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.81	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23 rd Ed. 2017-3120 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	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

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

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
- The result relate only to the items tested.
- ETRC does not assume any liability for any claims or damages related to the quality of parameter analyzed in the results and/or the performance of the equipment constituting to the results.
- All disputes subject to Lucknow jurisdiction.
- This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without our special permission in writing.
- Complain register is available in our laboratory.


Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge




Authorized Signatory
(Ritu Garg)
QM



ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE

Office & Laboratory: 2/261, Vishwas Khand, Gomti Nagar, Lucknow- 226 010 (U.P.)

Email : ETRCLTH@YAHOO.IN, Web: www.etrccindia.com

ISO 9001:2015, ISO 14001 : 2015, OHSAS 18001 : 2007

An Approved Laboratory from Ministry of Environment, Forest and Climate change, Govt. of India under EPA 1986

ETRC/PM14/TEST-REP/FT/17

TEST REPORT WATER ANALYSIS

Test Report Ref No.: ETRC/EPA/4525/2021	Date of Report : 23/06/2021
Name /Address/Type of Industry	M/s Indian Potash Limited Unit: Rohana Kalan (Distillery Division) P.O.: Rohana Mill, Block: Charthawal Tehsil: Muzaffarnagar District: Muzaffarnagar (U.P.) - 251202

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	Borewell (Near Project Site)	6	Sample Collected By	Industry Self
3	Sample received date	18.06.2021	7	Analysis Start Date	18.06.2021
4	Sample Quantity	5.0 liters	8	Analysis End Date	22.06.2021

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-4): 1983 Reaffirmed: 2017	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 23 rd Ed. 2017-4500 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): 1984 Reaffirmed: 2017	412.0	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 23 rd Ed. 2017-4500-NH ₃ F	BDL	0.5 - 2	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 23 rd Ed. 2017-5540 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 23 rd Ed. 2017-3500 Mg, B	30.13	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 23 rd Ed. 2017-4500-Cl ⁻ B	22.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 23 rd Ed. 2017-4500 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 23 rd Ed. 2017-5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 23 rd Ed. 2017-4500- SO ₄ ²⁻	16.82	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2320 B	288.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2340 C	260.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5



ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE

Office & Laboratory: 2/261, Vishwas Khand, Gomti Nagar, Lucknow- 226 010 (U.P.)

Email : ETRCLTH@YAHOO.IN, Web: www.etrccindia.com

ISO 9001:2015, ISO 14001 : 2015, OHSAS 18001 : 2007

An Approved Laboratory from Ministry of Environment, Forest and Climate change, Govt. of India under EPA 1986

Test Report Ref No.: ETRC/EPA/4525/2021

21	Iron as Fe	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.11	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.39	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23 rd Ed. 2017-3120 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	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/ 100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

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

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
- The result relate only to the items tested.
- ETRC does not assume any liability for any claims or damages related to the quality of parameter analyzed in the results and/or the performance of the equipment constituting to the results.
- All disputes subject to Lucknow jurisdiction.
- This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without our special permission in writing.
- Complain register is available in our laboratory.


Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge




Authorized Signatory
(Ritu Garg)
QM



ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE

Office & Laboratory: 2/261, Vishwas Khand, Gomti Nagar, Lucknow- 226 010 (U.P.)

Email : ETRCLTH@YAHOO.IN, Web: www.etrccindia.com

ISO 9001:2015, ISO 14001 : 2015, OHSAS 18001 : 2007

An Approved Laboratory from Ministry of Environment, Forest and Climate change, Govt. of India under EPA 1986

ETRC/PM14/TEST-REP/FT/17

TEST REPORT WATER ANALYSIS

Test Report Ref No.: ETRC/EPA/4703/2021	Date of Report : 22/07/2021
Name /Address/Type of Industry	M/s Indian Potash Limited Unit: Rohana Kalan (Distillery Division) P.O.: Rohana Mill, Block: Charthawal Tehsil: Muzaffarnagar District: Muzaffarnagar (U.P.) - 251202

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	Borewell (Near Project Site)	6	Sample Collected By	Industry Self
3	Sample received date	16.07.2021	7	Analysis Start Date	16.07.2021
4	Sample Quantity	5.0 liters	8	Analysis End Date	21.07.2021

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-4): 1983 Reaffirmed: 2017	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 23 rd Ed. 2017-4500 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): 1984 Reaffirmed: 2017	422.0	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 23 rd Ed. 2017-4500-NH ₃ F	BDL	0.5 - 2	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 23 rd Ed. 2017-5540 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 23 rd Ed. 2017-3500 Mg, B	31.10	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 23 rd Ed. 2017-4500-Cl ⁻ B	32.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 23 rd Ed. 2017-4500 F ⁻ C	0.40	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 23 rd Ed. 2017-5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 23 rd Ed. 2017-4500- SO ₄ ²⁻	26.8	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2320 B	284.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2340 C	264.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5



ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE

Office & Laboratory: 2/261, Vishwas Khand, Gomti Nagar, Lucknow- 226 010 (U.P.)

Email : ETRCLTH@YAHOO.IN, Web: www.etrccindia.com

ISO 9001:2015, ISO 14001 : 2015, OHSAS 18001 : 2007

An Approved Laboratory from Ministry of Environment, Forest and Climate change, Govt. of India under EPA 1986

Test Report Ref No.: ETRC/EPA/4703/2021

21	Iron as Fe	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.09	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.07	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.66	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23 rd Ed. 2017-3120 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	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

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

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
- The result relate only to the items tested.
- ETRC does not assume any liability for any claims or damages related to the quality of parameter analyzed in the results and/or the performance of the equipment constituting to the results.
- All disputes subject to Lucknow jurisdiction.
- This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without our special permission in writing.
- Complain register is available in our laboratory.

Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge



Authorized Signatory
(Ritu Garg)
QM



ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE

Office & Laboratory: 2/261, Vishwas Khand, Gomti Nagar, Lucknow- 226 010 (U.P.)

Email : ETRCLTH@YAHOO.IN, Web: www.etrccindia.com

ISO 9001:2015, ISO 14001 : 2015, OHSAS 18001 : 2007

An Approved Laboratory from Ministry of Environment, Forest and Climate change, Govt. of India under EPA 1986

ETRC/PM14/TEST-REP/FT/17

TEST REPORT WATER ANALYSIS

Test Report Ref No.: ETRC/EPA/4823/2021	Date of Report : 16/08/2021
Name /Address/Type of Industry	M/s Indian Potash Limited Unit: Rohana Kalan (Distillery Division) P.O.: Rohana Mill, Block: Charthawal Tehsil: Muzaffarnagar District: Muzaffarnagar (U.P.) - 251202

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	Borewell (Near Project Site)	6	Sample Collected By	Industry Self
3	Sample received date	12.08.2021	7	Analysis Start Date	12.08.2021
4	Sample Quantity	5.0 liters	8	Analysis End Date	16.08.2021

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-4): 1983 Reaffirmed: 2017	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 23 rd Ed. 2017-4500 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): 1984 Reaffirmed: 2017	412.0	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 23 rd Ed. 2017-4500-NH ₃ F	BDL	0.5 - 2	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 23 rd Ed. 2017-5540 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 23 rd Ed. 2017-3500 Mg, B	34.02	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 23 rd Ed. 2017-4500-Cl ⁻ B	26.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 23 rd Ed. 2017-4500 F ⁻ C	0.39	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 23 rd Ed. 2017-5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 23 rd Ed. 2017-4500- SO ₄ ²⁻	20.46	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2320 B	300.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2340 C	284.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5



ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE

Office & Laboratory: 2/261, Vishwas Khand, Gomti Nagar, Lucknow- 226 010 (U.P.)

Email : ETRCLTH@YAHOO.IN, Web: www.etrccindia.com

ISO 9001:2015, ISO 14001 : 2015, OHSAS 18001 : 2007

An Approved Laboratory from Ministry of Environment, Forest and Climate change, Govt. of India under EPA 1986


Test Report Ref No.: ETRC/EPA/4823/2021

21	Iron as Fe	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.10	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.04	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.42	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23 rd Ed. 2017-3120 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	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

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

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
- The result relate only to the items tested.
- ETRC does not assume any liability for any claims or damages related to the quality of parameter analyzed in the results and/or the performance of the equipment constituting to the results.
- All disputes subject to Lucknow jurisdiction.
- This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without our special permission in writing.
- Complain register is available in our laboratory.


Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge




Authorized Signatory
(Ritu Garg)
QM



ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE

Office & Laboratory: 2/261, Vishwas Khand, Gomti Nagar, Lucknow- 226 010 (U.P.)

Email : ETRCLTH@YAHOO.IN, Web: www.etrccindia.com

ISO 9001:2015, ISO 14001 : 2015, OHSAS 18001 : 2007

An Approved Laboratory from Ministry of Environment, Forest and Climate change, Govt. of India under EPA 1986

ETRC/PM14/TES-REP/FT/37

TEST REPORT AMBIENT AIR QUALITY MONITORING REPORT

Test Report Ref No.: ETRC/1509/9214/2021		Date of Report : 15/09/2021	
Name /Address/Type of Industry		M/s Indian Potash Limited Unit: Rohana Kalan (Distillery Division) P.O.: Rohana Mill, Block: Charthawal Tehsil: Muzaffarnagar District: Muzaffarnagar (U.P.) - 251202	
Monitored by		ETRC, Lucknow	
Location of Sampling point		Near Project Site	
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)	27	27
(e)	Time of Sampling Started (Hours)	08:16 am (08.09.2021)	08:16 am (08.09.2021)
(f)	Time of Sampling completed (Hours)	08:10 am (09.09.2021)	08:10 am (09.09.2021)
(g)	Total time of sampling (Minutes)	24 hour (1429 minutes)	24 hour (1429 minutes)
2	Average sampling rate for PM (m ³ /minute)	1.16	NA
3	Average sampling rate for gas (LPM)	0.5	NA
4	TOTAL VOLUME OF AIR SAMPLED • PM (m ³) • GAS (liter)	• 1657.872 • 714.6	• 23.815

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: 2017	µg/m ³	80.5	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	48.71	2.0 - 500	For 24 hour =60
3	Sulphur Dioxide (SO ₂)	IS: 5182 (Part-2): 2001 Reaffirmed: 2017	µg/m ³	14.36	5.0 - 1050	For 24 hour =80
4	Nitrogen Dioxide (NO ₂)	IS: 5182 (Part-6): 2006 Reaffirmed: 2017	µg/m ³	19.52	6.0 - 750	For 24 hour =80

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

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
- The result relate only to the items tested.
- ETRC does not assume any liability for any claims or damages related to the quality of parameter analyzed in the results and/or the performance of the equipment constituting to the results.
- All disputes subject to Lucknow jurisdiction.
- This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without our special permission in writing.
- Complain register is available in our laboratory.


Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge




Authorized Signatory
(Ritu Garg)
QM



ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE

Office & Laboratory: 2/261, Vishwas Khand, Gomti Nagar, Lucknow- 226 010 (U.P.)

Email : ETRCLTH@YAHOO.IN, Web: www.etrccindia.com

ISO 9001:2015, ISO 14001 : 2015, OHSAS 18001 : 2007

An Approved Laboratory from Ministry of Environment, Forest and Climate change, Govt. of India under EPA 1986

TEST REPORT

AMBIENT NOISE MONITORING AND ANALYSIS REPORT

Test Report Ref No.: ETRC/1509/9215/2021		Date of Report : 15/09/2021
Name /Address/Type of Industry		M/s Indian Potash Limited Unit: Rohana Kalan (Distillery Division) P.O.: Rohana Mill, Block: Charthawal Tehsil: Muzaffarnagar District: Muzaffarnagar (U.P.) - 251202
Monitored by		ETRC, Lucknow
Sr. No.	GENERAL INFORMATION	DETAILS
(a)	Date of monitoring	08/09/2021 (6:00 AM) to 09/09/2021 (6:00 AM)
(b)	Sample Description	Ambient Noise
(c)	Sampling Location	Near Project Site
(d)	Environmental Condition	Normal


TEST RESULT

Ambient Noise Level				
Sr. No.	Parameter	Unit	Results DAY TIME (6:00 AM – 10:00 PM)	Results NIGHT TIME (10:00 PM – 6:00 AM)
1	Equivalent sound level	dB(A)	61.54	48.25

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

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

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
- The result relate only to the items tested.
- ETRC does not assume any liability for any claims or damages related to the quality of parameter analyzed in the results and/or the performance of the equipment constituting to the results.
- All disputes subject to Lucknow jurisdiction.
- This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without our special permission in writing.
- Complain register is available in our laboratory.


Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge




Authorized Signatory
(Ritu Garg)
QM



ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE

Office & Laboratory: 2/261, Vishwas Khand, Gomti Nagar, Lucknow- 226 010 (U.P.)

Email : ETRCLTH@YAHOO.IN, Web: www.etrccindia.com

ISO 9001:2015, ISO 14001 : 2015, OHSAS 18001 : 2007

An Approved Laboratory from Ministry of Environment, Forest and Climate change, Govt. of India under EPA 1986

ETRC/PM14/TES-REP/FT/17

TEST REPORT WATER ANALYSIS

Test Report Ref No.: ETRC/1509/9216/2021	Date of Report : 15/09/2021
Name /Address/Type of Industry	M/s Indian Potash Limited Unit: Rohana Kalan (Distillery Division) P.O.: Rohana Mill, Block: Charthawal Tehsil: Muzaffarnagar District: Muzaffarnagar (U.P.) - 251202

SAMPLE DETAILS

1	Water/ Waste Water	Ground Water	5	Packing Condition	Sealed
2	Sample Description	Borewell (Near Project Site)	6	Sample Collected By	ETRC, Lucknow
3	Sample received date	09.09.2021	7	Analysis Start Date	09.09.2021
4	Sample Quantity	5.0 liters	8	Analysis End Date	14.09.2021

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-4): 1983 Reaffirmed: 2017	<5.0	5 - 30	5	15
2	Odour	-	IS: 3025 (Part-5): 1983 Reaffirmed: 2017	Agreeable	Qualitative	Agreeable	Agreeable
3	pH	-	APHA 23 rd Ed. 2017-4500 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): 1984 Reaffirmed: 2017	418.6	10 - 5000	500	2000
6	Ammonia (as total ammonia-N)	mg/l	APHA 23 rd Ed. 2017-4500-NH ₃ F	BDL	0.5 - 2	0.5	No Relaxation
7	Anionic Detergents (as MBAS)	mg/l	APHA 23 rd Ed. 2017-5540 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 23 rd Ed. 2017-3500 Mg, B	34.02	0.1 - 200	30	100
10	Chloride as Cl	mg/l	APHA 23 rd Ed. 2017-4500-Cl ⁻ B	30.0	2.0 - 2000	250	1000
11	Fluoride as F	mg/l	APHA 23 rd Ed. 2017-4500 F ⁻ C	0.35	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 23 rd Ed. 2017-5530 C	BDL	0.001 - 0.005	0.001	0.002
15	Sulphate as SO ₄	mg/l	APHA 23 rd Ed. 2017-4500- SO ₄ ²⁻	28.4	1.0 - 500	200	400
16	Alkalinity as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2320 B	288.0	2.0 - 1000	200	600
17	Total Hardness as CaCO ₃	mg/l	APHA 23 rd Ed. 2017-2340 C	272.0	5.0 - 800	200	600
18	Aluminium as Al	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.015 - 5.0	0.03	0.2
19	Boron as B	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.5	1.0
20	Copper as Cu	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.03 - 10	0.05	1.5



ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE

Office & Laboratory: 2/261, Vishwas Khand, Gomti Nagar, Lucknow- 226 010 (U.P.)

Email : ETRCLTH@YAHOO.IN, Web: www.etrccindia.com

ISO 9001:2015, ISO 14001 : 2015, OHSAS 18001 : 2007

An Approved Laboratory from Ministry of Environment, Forest and Climate change, Govt. of India under EPA 1986

Test Report Ref No.: ETRC/1509/9216/2021

21	Iron as Fe	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.11	0.05 - 20	0.3	No Relaxation
22	Manganese as Mn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.06	0.02 - 5.0	0.1	0.3
23	Zinc as Zn	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	0.69	0.05 - 15	5	15
24	Cadmium as Cd	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 2.0	0.003	No Relaxation
25	Lead as Pb	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.01 - 10	0.01	No Relaxation
26	Mercury as Hg	µg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.5 - 1000	1.0	No Relaxation
27	Nickel as Ni	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.05 - 5.0	0.02	No Relaxation
28	Arsenic as As	mg/l	APHA 23 rd Ed. 2017-3120 B (ICP-OES)	BDL	0.02 - 2.0	0.01	0.05
29	Total Chromium	mg/l	APHA 23 rd Ed. 2017-3120 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	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	
31	T. coli	MPN/100 ml	IS: 1622 - 1981 Reaffirmed: 2019	Absent	≥ 2 MPN Present or Absent per 100 ml	Shall not be detected in any 100 ml sample	

BDL=Below Detection Limit

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

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
- The result relate only to the items tested.
- ETRC does not assume any liability for any claims or damages related to the quality of parameter analyzed in the results and/or the performance of the equipment constituting to the results.
- All disputes subject to Lucknow jurisdiction.
- This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without our special permission in writing.
- Complain register is available in our laboratory.


Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge




Authorized Signatory
(Ritu Garg)
QM



ENVIRONMENTAL AND TECHNICAL RESEARCH CENTRE

Office & Laboratory: 2/261, Vishwas Khand, Gomti Nagar, Lucknow- 226 010 (U.P.)

Email : ETRCLTH@YAHOO.IN, Web: www.etrccindia.com

ISO 9001:2015, ISO 14001 : 2015, OHSAS 18001 : 2007

An Approved Laboratory from Ministry of Environment, Forest and Climate change, Govt. of India under EPA 1986

ETRC/PM14/TEST-REP/FT/38

TEST REPORT SOIL ANALYSIS

Test Report Ref No.: ETRC/1509/9217/2021	Date of Report : 15/09/2021
Name /Address/Type of Industry	M/s Indian Potash Limited Unit: Rohana Kalan (Distillery Division) P.O.: Rohana Mill, Block: Charthawal Tehsil: Muzaffarnagar District: Muzaffarnagar (U.P.) - 251202

SAMPLE DETAILS

1	Sampling Location	Near Project Site	5	Packing Condition	Sealed
2	Sample Description	Soil Sample	6	Sample Collected By	ETRC, Lucknow
3	Sample received date	09.09.2021	7	Analysis Start Date	09.09.2021
4	Sample Quantity	500 gms	8	Analysis End Date	14.09.2021


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: 2016	7.3	1 - 14
2	Electrical Conductivity	(µmhos/cm)	IS: 14767:2000, Reaffirmed 2016	312.0	1.0 - 40000
3	Moisture content	%	IS: 2720 (Part -2): 1973 Reaffirmed: 2015	3.20	1.0 - 50
4	Sulphur	Kg/Hec	IS: 14685: 1999 Reaffirmed: 2014	13.56	5.0 - 100
5	Boron	mg/kg	ETRC/ LABSOPS/06, ISSUE NO.1 Dated 10.08.2015	BDL	4.0 - 100
6	Copper	mg/kg	ETRC/ LABSOPS/07, ISSUE NO.1 Dated 10.08.2015	0.37	0.3 - 500
7	Zinc	mg/kg	ETRC/ LABSOPS/08, ISSUE NO.1 Dated 10.08.2015	1.52	1.0 - 500
8	Iron	mg/kg	ETRC/ LABSOPS/09, ISSUE NO.1 Dated 10.08.2015	12.98	5.0 - 500
9	Manganese	mg/kg	ETRC/ LABSOPS/10, ISSUE NO.1 Dated 10.08.2015	7.2	5.0 - 500


BDL= Below Detection Limit

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

- ETRC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices and that this data reflects our best attempt to generate accurate results for the sample, mentioned in the report as above.
- The result relate only to the items tested.
- ETRC does not assume any liability for any claims or damages related to the quality of parameter analyzed in the results and/or the performance of the equipment constituting to the results.
- All disputes subject to Lucknow jurisdiction.
- This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without our special permission in writing.
- Complain register is available in our laboratory.


Authorized Signatory
(Sandeep Kr Verma)
Lab-Incharge




Authorized Signatory
(Ritu Garg)
QM

A decorative border consisting of a repeating pattern of palm trees with green fronds and brown trunks, arranged in a rectangular frame around the page.

Enclosure 2:

EC

State Level Environment Impact Assessment Authority, Uttar Pradesh

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 : doeuplko@yahoo.com

Website : www.seiaaup.com

To,

M/s Indian Potash Ltd, (Distillery- Unit),
Rohana Kalan, P.O. Rohana Mill,
Block Charthawal, Tehsil- Muzaffarnagar,
District- Muzaffarnagar, U.P.

Ref. No.....395...../Parya/SEAC/5764-5646/2019

Date: 14 October, 2020

Sub: Environmental Clearance for Expansion of existing molasses based distillery from 45 KLD to 65.3 KLD (RS/ENA/AA) along with power plant from 1.4 MW to 2.0 MW at Khasra No.-634, 634 M, 633, 631, 627, 626, 624 partly, 622, Village-Rohana Mill, Block: Charthawal, Tehsil & District: Muzaffarnagar (U.P.) by M/s Indian Potash Ltd.

Dear Sir,

Please refer to your application/letters 09-04-2020, 02-06-2020, 09-08-2020, 13-08-2020 & 17-08-2020 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 28-08-2020 and SEIAA in its meeting dated 17-09-2020.

A presentation was made by project proponent along with their consultant M/s Environmental & Technical Research Centre. The proponent, through the documents submitted and the presentation made, informed the committee that:-

1. The Environmental clearance is sought for Expansion of existing molasses based distillery from 45 KLD to 65.3 KLD (RS/ENA/AA) along with power plant from 1.4 MW to 2.0 MW at Khasra No.-634, 634 M, 633, 631, 627, 626, 624 partly, 622, Village-Rohana Mill, Block: Charthawal, Tehsil & District: Muzaffarnagar (U.P.) by M/s Indian Potash Ltd.
2. The additional terms of reference in the matter were issued by SEIAA, U.P. vide letter no. 208/Parya/SEAC/5646/2018, dated 27/07/2020
3. Final EIA report submitted by the project proponent on 13th August, 2020.
4. Salient features of the project:

Sr. No.	Item	Details
1	Name of the Project	M/s Indian Potash Ltd. (Rohana Unit: Distillery) Village: Rohana Mill, Block: Charthawal, Tehsil & District: Muzaffarnagar (U.P.)
2	Capacity of Distillery	Expansion from 45 KLD to 65.3 KLD (Rectified Spirit/Extra Neutral Alcohol/Ethanol)
3	Power Generation	From 1.4 MW to 2.0 MW Co- Generation of Power.
4	Category	Category "B" and Schedule - 5 (g)

5. Other project details:

S.No	Particulars	Details of Proposed Project (Capacity: 65.3 KLD)
1	Proposed capacity of Plant	Expansion of the existing project from 45 KLD to 65.3 KLD distillery (RS/ENA/AA) along with Co gen Power from 1.4 MW to 2 MW.
2	Total project cost	Rs.11300 Lakhs
3	Total project area	6.988 Hectares (17.267 Acres)(Adjoining existing Sugar Mill) at Khasra no. 634, 634 M, 633, 631, 627, 626, 624 partly, 622M Partly Village: Rohana Mill, Block: Charthawal, Tehsil & District: Muzaffarnagar (U.P.)
4	Category of Project	Category "B" and Schedule : 5 (g)
5	Process Involve	Distillery Process :



		1. Molasses Dilution 2. Yeast Propagation 3. Fermentation 4. Multi Pressure Distillation
6	Product	RS/ ENA / Ethanol (AA) : 65.3 KLD
7	Raw material and its Quantity	Molasses) & Sugarcane Syrup 284 MT/DAY of C-Molasses or 200 MT/Day of B-Heavy Molasses or 218 MT/Day of 50% Sugar Syrup Source: Adjacent own sugar unit & other standalone unit in nearby areas.
8	Co-Gen Power Generation	2.0 MW Co generation power
9	Fresh Water Requirement	Fresh Water Requirement : 445 KLD (Industrial Use) Source: Treated and Condensate water from adjacent sugar industry as well as surface water through canal.
10	Power requirement	The total power requirement for the project will be 1.8 MW. Source: Proposed 2.0 MW Co – Generation Power Plant.
11	Fuel and its quantity	Slop will be incinerated in boiler along with coal/husk as supporting fuel. Slop: 166 TPD Coal Requirement : 60 TPD (or Husk:70 TPD)
12	Steam requirement	17 TPH
13	Number of boiler	1 no. Boiler: 22 TPH Technology : (Slop Fired incineration Boiler)
14	Air Pollution Control Device	ESP
15	Number of Stack	Proposed One Stack: 70 Meters
16	Waste Water treatment	Spent wash treatment:326 KLD It will be concentrated in Multi effect evaporation and then concentrate from MEE will be utilized in Incineration fired boiler as a fuel along with Coal/ Husk. Other effluent treatment:507 KLD MEE condensate, Blowdowns of CT, Boiler, Floor washing etc will be treated in CPU and treated water will be recycled back to process and cooling in Distillation & CT.
17	Waste Water Discharge	Unit is based Zero Liquid discharge Industry (ZLD)
18	Solid Waste Generation	Total Ash generated : 35 TPD Fermenter sludge: 2 TPD Disposal: Total Ash and Fermenter Sludge will be used as manure.
19	No of Working Days	350 Days / Annum.
20	Employment Generation	80 Number
21	Green Belt Development	33% of the project area will be covered under green belt plantation (2.306 Hectare)
22	Cost towards Environmental Protection measures (capital cost)	40 Crores (it include Waste water treatment system, Boiler, MEE, APCS, Green Belt, Health Safety equipment, granules formation machinery etc)
23	Recurring cost towards Environmental control measures	1 Crore per year.
24	CSR expenses	2% of total annual Profit as per the CSR Act (By Ministry of corporate affairs) Notification GSR 129 (E).
25	Corporate Environmental Responsibility (CER)	169.5 lakhs (1.5% of project cost)

6. Land Use Details:

Sr No.	Land use	Area (sqm)	Area in %
1	Green Belt Area	23,060.0	33.00



E.C. for Expansion of existing molasses based distillery from 45 KLD (RS/ENA/AA) along with power plant from 1.4 MW to 2.0 MW at Khasra No.-634, 634 M, 633, 631, 627, 626, 624 partly, 622, Village-Rohana Mill, Block: Charthawal, Tehsil & District: Muzaffarnagar (U.P.) by M/s Indian Potash Ltd.

2	Open Land	23396.3	33.48
3	Road/ Paved Area	4330.0	6.20
4	Covered /Rooftop area of building/ sheds	19093.7	27.32
	GRAND TOTAL	69,880.0	100

7. Raw material required with daily consumption and transport:

Sl. No	Particular	Requirement	Storage	Source and mode of transportation
1.	Molasses (All variants like B-Heavy, Final C-Molasses) & Sugarcane Syrup	C-Molasses: 284 MT/Day or B-Heavy Molasses :200 MT/Day or 218 MT/Day of 50% Sugar Syrup	Molasses storage tanks	Through Sugar Mills via Road
Other Chemicals				
2.	Sulphuric Acid	435 Kg/day	Storage facility will be available for the chemical within proposed distillery premises as per requirement.	Nearby markets/ by roads
3.	Sodium hydroxide (caustic)	870 kg/ day		
4.	Nutrients	205 kg/day		
5.	Enzymes	35.7 kg/Day		
6.	Anti-foam agents	58.0 kg/Day		

8. Plant and machinery:

- 1) 65.3 KLD Ethanol plant with integrated evaporator and alcohol storage system, MEE
- 2) 22 TPH concentrated spent wash (slop) fired incineration boiler including air pollution control system (ESP)
- 3) Ash handling system,
- 4) Fuel handling system
- 5) Turbo generator & condenser with arrangement for the export of surplus power
- 6) Power distribution system
- 7) Cooling towers
- 8) Plant piping, valves etc
- 9) Pumps with drive motors
- 10) Condensate Polishing unit
- 11) Distributed control system
- 12) Fire fighting system etc.
- 13) Molasses storage tanks
- 14) Product storage tanks
- 15) Weighbridges
- 16) RCC Chimney

9. Water requirement details:

1	Industry Use	445 KLD(@ 6.8 KL/ KL of product)
2	Domestic Use	20 KLD
3	Total Water Requirement	465 KLD
Source: Treated and Condensate water from adjacent sugar industry as well as surface water through canal.		

10. Waste water generation:

1	Waste Water Generation	Spent Wash: 326 KLD (@ 5 KL/KL of Product) Other Effluents: 507 KLD
2	Treatment Technology	Spent wash treatment: It will be concentrated in Multi effect evaporation and then concentrate from MEE will be utilized in Incineration fired boiler as a fuel along with Coal/ Husk. Other effluent treatment: MEE condensate, Blow downs of CT, Boiler, Floor washing etc. will be treated in CPU and treated water will be recycled back to process and cooling in



Distillation & CT.

11. The project proposal falls under Category "B" and Schedule - 5 (g) of EIA Notification, 2006 (as amended). Based on the recommendations of the State Level Expert Appraisal Committee Meeting (SEAC) held on 28-08-2020 the State Level Environment Impact Assessment Authority (SEIAA) in its Meeting held 17-09-2020 and decided to grant the Environmental Clearance for proposed project along with subject to the effective implementation of the following conditions:-

i. Statutory compliance:

1. 45 days monitoring report of the area for air quality, water quality, Noise level. Besides flora & fauna should be examined twice a week and be submitted within 60 days for a record.
2. Due to unavoidable circumstance and covid-19 pandemic, the authority are unable to visit the site therefore, it is not possible to make available the latest certified compliance report. In view of this the committee decided that the certified compliance report should be submitted within 03 months.
3. 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.
4. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
5. 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).
6. 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.
7. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.
8. 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. If the proposed project is situated in notified area of ground water extraction, where creation of new wells for ground water extraction is not allowed, requirement of fresh water shall be met from alternate water sources other than ground water or legally valid source and permission from the competent authority shall be obtained to use it.
2. The project proponent shall ensure that the distillery shall be on ZLD basis with incineration of spent wash in slop boiler. As proposed treated waste water should be completely recycled /reused and ZLD should be achieved. Under no circumstances treated waste water and effluent shall be discharged to any drain/sewer line/ inland surface water/Nala etc.
3. Directions/suggestions given during public hearing and commitment made by the project proponent should be strictly complied.
4. 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.

5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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.
11. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
12. 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.
13. 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).
14. 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.
15. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
16. The Ministry reserves the right to stipulate additional conditions if found necessary.
17. The Company in a time bound manner shall implement these conditions.
18. 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.
19. 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.
20. 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.

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 Muzaffarnagar. 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/identified 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.

The project proponent has to mandatorily submit the compliance of specific conditions no- 1, 3, 4 & 5



E.C. for Expansion of existing molasses based distillery from 45 KLD to 65.3 KLD (RS/ENA/AA) along with power plant from 1.4 MW to 2.0 MW at Khasra No.-634, 634 M, 633, 631, 627, 626, 624 partly, 622, Village-Rohana Mill, Block: Charthawal, Tehsil & District: Muzaffarnagar (U.P.) by M/s Indian Potash Ltd.

given in E.C. letter within 3 months, failing which the 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/5764-5646/2019 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 Muzaffarnagar.
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