SIX-MONTHS COMPLIANCE STATUS REPORT **November 2021 - April 2022**

TALCHER FERTILIZERS LIMITED VILLAGE VIKRAMPUR THESIL **TALCHER DISTRICT ANGUL, ODISHA TALCHER DISTRICT ANGUL, ODISHA**

ABC Techno Labs India Private Limited

An ISO: 9001:2008, ISO:14001:2004 & OHSAS:18001:2007 Certified Company

(Accrediated by NABL, NABET, MoEF)



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1.0 About the Industry

In 1971, The Fertilizer Corporation of India Ltd. (FCIL), set up Talcher Unit over an area of 902 acre in the district of Angul, Odisha which is located about 126 km away from Bhubaneswar to produce urea using coal as feed stock. Licensor for the Coal gasification was M/s Krupp Koppers, Germany and for Ammonia and Urea units Ammonia synthesis, M/s Tecnimont, Italy.

Commercial Production of Ammonia and Urea commenced on 01.11.1980 with Ammonia and Urea production capacity of 900 and 1500 Tons per day respectively. However due to frequent power restriction, obsolete and mismatch of technology and precarious steam balance the plant could not be sustained. The Board for Industrial and Financial Reconstruction (BIFR) declared the FCIL sick in 1992 and in 2002 Government of India initiated actions to close the company.

Due to shortage of domestic Urea and availability of large land banks, infrastructure and tied-up rail, water & electricity in the units of FCIL, GoI in the year 2007 decided to revive all units of FCIL. Government of India approved Policy for new Investments in the Urea Sector in September 2008 and constituted Empowered Committee of Secretaries (ECOS) in October 2008 with the mandate to evaluate all options of revival of closed units of FCIL/HFCL and to make suitable recommendations for consideration of the Government. In August, 2011, the Cabinet Committee on Economic Affairs (CCEA) had approved the Draft Rehabilitation Scheme (DRS) for revival of all the Units of FCIL and HFCL. DRS envisaged revival of Talcher Unit by the consortium of M/s. Rashtriya Chemical & Fertilizers Limited (RCF), M/s Coal India Limited (CIL) and M/s GAIL (India) Ltd. (GAIL).

Project - Talcher Fertilizers Limited, Talcher, Odisha.

EC Letter No. - F. No. J-11011/231/2013-IA-II(I)dated 9th February, 2018

A. STATUTORY COMPLIANCE:

S.No.	Conditions	Compliance
1	In view of the base line air quality data for PM ₁₀ already exceeding the prescribed standards, one more season data to be collected to confirm the consistency of readings/values, and for suggesting mitigating measures accordingly.	•Monitoring of PM ₁₀ has been completed for the period November 2021 to April 2022 •Copy of the same is enclosed in this report.
2	The project proponent shall, take stringent mitigating measures to minimize the incremental concentration of air pollutants (mainly PM ₁₀ & PM _{2.5}) to the extent possible due to the proposed industrial operations.	As the monitored results are well within the specified limits no additional measures are proposed to be installed.
3	The project proponent shall develop local air quality management plan in consultation with SPCB and implemented to achieve desired standards.	Compliance Assured
4	The incremental ground level concentrations (GLCs) for PM ₁₀ , PM _{2.5} , SO2& NO2 due to the increased vehicular and other allied / developmental activities, shall be analyzed and reported for actual impact of the project, besides remedial measures.	Compliance Assured • To check the incremental increase in air pollutants during construction phase, two monitoring stations were selected in the project site. The data is included in this report. • As indicated in EIA the major transport of raw material will be by conveyor and hence no impact on GLC due to transport is expected.
5	Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.	Consent to Establish (CTE) is obtained from the Office of the State Pollution Control Board, Odisha, vide No. 12951/IND-II-NOC-6253 dated: 30.11.2019. The same enclosed as Annexure – II.
6	As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.	Feasibility study for ZLD will be undertaken and appropriate treatment/recycling method will be selected to achieve ZLD.
7	Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.	Compliance Assured. It will be obtained in consent to operate.
8	National Emission Standards for Organic Chemicals Manufacturing industry issued by the Ministry vide G,S,R, 608(E) dated 21st July, 2010 and amended from time to time shall be followed.	Compliance Assured.
9	To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the	Plants will be designed with state of Art technologies with inbuilt pollution control

Six Monthly Computative Report of Taicher Fertinzers Emilited, Taicher, Ouisna.

	NMQS. The gaseous emissions shall be	systems so that the prescribe norms and
	dispersed through stack of adequate	fugitive emissions will be under control.
	height as per CPCB/SPCB guidelines.	
10	Total freshwater requirement shall not exceed 49200 cum/day to be met from surface water from Brahmini River. Prior permission in this regard shall be obtained from the concerned regulatory authority.	 Fresh Water source will be received from the stipulated source. And all necessary permissions will be ensured prior to installation of the project.
11	Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.	Compliance Assured.
12	Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc., Flame arresters shall be provided on tank farm, and solvent transfer through pumps.	Compliance Assured.
13	ETP sludge, process inorganic & evaporation salt, if any, shall be disposed of to the TSDF.	Compliance Assured.
14	The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and imports 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.	Compliance Assured.
15	The company shall undertake waste minimization measures as below:	Compliance Assured.
	a) Metering and control of quantities of active ingredients to minimize waste.b) Reuse of by-products from the process as	Compliance Assured.
	raw materials or as raw material substitutes in other processes. c) Use of automated filling to minimize	Compliance Assured.
	spillage d) Use of Close Feed system into batch	Compliance Assured.
	reactors. e) Venting equipment through vapour	Compliance Assured.
	recovery system. f) Use of high-pressure hoses for equipment.	Compliance Assured.
16	The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along roadsides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.	The project activities will be implemented in existing site of TFL with lot of greenery and the guideline of 33% area under greenbelt out of total project area will be achieved.
17	All the commitment made regarding issues raised during the Public Hearing/consultation meeting held on 30h August ,2017 shall be satisfactorily implemented.	CSR dept. will keep aside a sum for CSR activities for project to meet public hearing requirement to the practical extent possible for an industrial unit.
18	At least 2.5% of the total project cost shall be allocated for Enterprise Social Commitment based on Public Hearing issues and item-wise	Compliance Assured.

19	details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines, Acoustic enclosure shall be provided to DG set for controlling the noise pollution,	Compliance Assured.
20	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.	Compliance Assured.
21	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	HR and OHC Dept. will conduct regular health checkups and records for the same will be maintained as per the Factories Act.
22	Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. 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.	Compliance Assured.

COMPLIANCE OF OTHER GENERIC CONDITIONS

1	The project authorities must strictly adhere to the	Compliance Assured.
	stipulations made by the State Pollution Control	
	Board, Central Pollution Control Board, State	
	Government and any other statutory authority.	
2	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of	Compliance Assured.
	conditions imposed and to add additional environmental protection measures required, if any.	
3	The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one station each is Installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	Compliance Assured.
4	The National Ambient Air Quality Emission Standards issued by the Ministry vide G,S.R.	Compliance Assured.

	No. 826(E) dated 16th November, 2009 shall be	
	followed,	
5	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 ambient noise levels shall conform to the standards prescribed under Environment (Protection)Act, 1986 Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (night time).	Compliance Assured.
6	The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.	Compliance Assured.
7	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.	
8	The company shall also comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.	Compliance Assured.
9	The company shall undertake all relevant measures for improving the socioeconomic conditions of the surrounding area. ESC activities shall be undertaken by involving local villages and administration.	CSR activities shall be undertaken by involving local and other stake holders.
10	The company shall undertake eco developmental measures including community welfare measures in the project area for the overall improvement of the environment.	Greenery development in the area will be undertaken. Activities shall be undertaken for Developmental measures for welfare of overall environment.
11	The. company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management pollution control measures shall not be diverted for any other purpose,	Compliance Assured.
12	A copy of the clearance letter shall be sent by the	Complied.
12		Complied.

	Panchayat, Zilla Parishad /Municipal Corporation, Urban local Body and the local	
	NG0, if any, from whom suggestions/ representations, if any, were received while processing the proposal.	
13	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF & CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six-monthly compliance status report shall be posted on the website of the company.	Compliance assured.
14	The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by email,	This will be complied after commencement of commercial production.
15	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry at http://moef.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local, newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.	Compliance done. Communicated on In local Odiya newspaper and English newspaper. i) Oriya on date 16.02.2018 in Samaj (Angul Edition) ii) English on date 15.02.2018 in New Indian Express (Bhubaneswar Edition) Copy of the same has been submitted already.
16	The project authorities 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 and the date of start of the project.	This will be complied with. Presently, the site preparation work is under progress.

Annexure 1 Environmental Clearance Letter

Annexure - I

F. No. J-11011/231/2013-IA-II(I) Government of India Ministry of Environment, Forest and Climate Change (IA- II Section)

Indira Paryavaran Bhawan Jorbagh Road, New Delhi -3

Dated: 9th February, 2018

To

M/s Talcher Fertilizers Ltd Village Vikrampur, Tehsil Talcher District <u>Angul</u> (Odisha)

Sub: Setting up Ammonia & Urea Fertilizer Unit at Village Vikrampur, Tehsil Talcher, District Angul (Odisha) by M/s Talcher Fertilizers Ltd - Environmental Clearance -reg.

Sir,

This has reference to your proposal No. IA/OR/IND2/58560/2013 dated 11th October, 2017, submitting the EIA/EMP report with public consultation details on the above subject matter.

- The Ministry of Environment, Forest and Climate Change has examined the proposal for environmental clearance to the project for setting up ammonia & urea fertilizer unit based on coal gasification for production of 1.27 MMTPA of neem coated urea (end product) by M/s Talcher Fertilizers Ltd at Village Vikrampur, Tehsil Talcher, District Angul (Odisha).
- The total land area of the project is 570 acre, out of which green belt will be developed in 180 acre. The cost of the project is Rs.10741.05 Crores. The project will provide employment to 1500 people during construction phase.
- The proposed product/unit and capacity are as under:

S.No	Product/Unit	Capacity
1	Ammonia	2200 MTPD
2	Urea (Neem coated)	3850 MTPD
3	Coal Gasification Plant	Synthesis Gas: 242978 Nm3/hr

 Total water requirement for the project is 49,200 m³/day. The permission for drawal of surface water from Brahmini River has been obtained from the State Government of Odisha vide letter No. 1513/SF/59 dated 3rd November, 2009.

The power requirement of 72 MW will be met from the Captive Power Plant. The raw Material required for the project are Coal, Pet Coke and lime stone. During initial stages of operation of the plant, coal shall be supplied through Bhubaneswari Coal Mine of M/s Mahanadi Coalfields Ltd. Later, the project proponent shall develop the dedicated coal mine for the procurement of coal in the desired quantity.

- The project/activity is covered under category A of item 5(a) 'Chemical fertilizers' of the Schedule
 to the Environment Impact Assessment Notification, 2006, and requires appraisal at central level by the
 sectoral Expert Appraisal Committee in the Ministry.
- 7. The terms of reference (ToR) for the project was initially granted on 26th November, 2013, and then extended up to 25th November, 2017. The ToR was transferred in the name of M/s Talcher Fertilizers Ltd from M/s Rashtriya Chemicals & Fertilizers Ltd, vide Ministry's letter dated 27th September, 2017. Public hearing was conducted by the State Pollution Control Board on 30th August, 2017.



- 8. The proposal for environmental dearance was considered by the EAC (Industry-2) in its meeting held on 12-13 October, 2017. The project proponent and the accredited consultant M/s Projects & Development India Ltd presented the EIA/EMP report. The committee found the EIA/EMP report satisfactory and recommended the proposal for environmental clearance with certain conditions.
- 9. Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry-2), the Ministry of Environment, Forest and Climate Change hereby accords environmental clearance to the project 'Setting up Ammonia & Urea Fertilizer Unit for production of 1.27 MMTPA of Neem Coated Urea (end product)' by M's Talcher Fertilizers Ltd at Village Vikrampur, Tehsil Talcher, District Angul (Odisha), under the provisions of EIA Notification, 2006 and the amendments made therein, subject to the compliance of terms and conditions, as under:-
- (i) In view of the base line air quality data for PM₁₀ already exceeding the prescribed standards, one more season data to be collected to confirm the consistency of readings/values, and for suggesting mitigating measures accordingly.
- (ii) The project proponent shall take stringent mitigating measures to minimize the incremental concentration of air pollutants (mainly PM₁₀ & PM_{2.5}) to the extent possible due to the proposed industrial operations.
- (li) The project proponent shall develop local air quality management plan in consultation with SPCB and implemented to achieve desired standards.
- (iv) The incremental ground level concentrations (GLCs) for PM₁₀, PM₂₅, SO₂ & NO₂ due to the increased vehicular and other allied/developmental activities, shall be analysed and reported for actual impact of the project, besides remedial measures.
- (v) Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
- (vi) As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.
- (vii) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.
- (viii) National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended from time to time shall be followed.
- (ix) To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.
- (x) Total fresh water requirement shall not exceed 49200 cum/day to be met from surface water from Brahmini River. Prior permission in this regard shall be obtained from the concerned regulatory authority.
- (xi) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through quard pond.
- (xii) Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.
- (xiii) ETP sludge, process Inorganic & evaporation salt, if any, shall be disposed off to the TSDF.



- (xiv) 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.
- (xv) The company shall undertake waste minimization measures as below:-
 - (a) Metering and control of quantities of active ingredients to minimize waste.
 - (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
 - (c) Use of automated filling to minimize spillage.
 - (d) Use of Close Feed system into batch reactors.
 - (e) Venting equipment through vapour recovery system.
 - (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- (xvi) The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
- (xvii) All the commitment made regarding issues raised during the Public Hearing/consultation meeting held on 30th August, 2017 shall be satisfactorily implemented
- (xviii) At least 2.5% of the total project cost shall be allocated for Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.
- (xix) For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
- (xx) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.
- (xxi) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- (xxii) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. 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.
- **9.1.** The grant of environmental clearance is subject to compliance of other general conditions, as under:-
- (i) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board, Central Pollution Control Board, State Government and any other statutory authority.
- (ii) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
- (iii) The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one station each is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.



- (iv) The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. . 826(E) dated 16th November, 2009 shall be followed.
- (v) 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 ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- (vi) The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.
- (vii) 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.
- (viii) The company shall also comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.
- (ix) The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. ESC activities shall be undertaken by involving local villages and administration.
- (x) The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- (xi) The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.
- (xii) A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
- (xiii) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
- (xiv) The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.
- (xv) The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry at http://moef.nic.ln. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular



- language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.
- (xvi) The project authorities 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 and the date of start of the project.
- 10. The Ministry may revoke or suspend the clearance, at subsequent stages, if implementation of any of the above conditions is not satisfactory.
- 11. The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.
- 12. The above conditions will be enforced, inter alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Water 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.

(S. K. Srivastava)

Scientist E.

Copy to:-

- The Additional PCCF (C), MoEF&CC Regional Office (EZ), A/3, Chandersekharpur, Bhubaneswar -23 (Odisha)
- 2. The Secretary, Department of Forest and Environment, Government of Odisha, Bhubaneswar (Odisha)
- 3. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi 32
- The Member Secretary, Odisha State Pollution Control Board, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit - VIII, Bhubaneswar -12 (Odisha)
- Guard File/Monitoring File/Website/Record File

(S. K. Srivastava)

Scientist E

Baseline Monitoring Report Results (November 2021 - April 2022)

1.0 Air Quality Monitoring Report (November 2021 - April 2022)

The prime objective of ambient air quality monitoring is to evaluate the existing air quality of the proposed project area. This will also be useful for assessing the conformity to standards of the ambient air quality during the operations of proposed project. This section describes the selection of sampling locations, methodology adopted for sampling, analytical techniques and frequency of sampling Meteorological conditions prevailing within study area.

1. 1 Sampling and Analytical Techniques

The sampling and analytical techniques used for the monitoring of Ambient Air quality is given in **Table –1**.

TABLE - 1: TECHNIQUES USED FOR AMBIENT AIR QUALITY MONITORING

S.No.	Parameter	Technique	Technical Protocol	Detectable Limit
1	Particulate Matter size less than 10 μm (PM10), μg/m3	Gravimetric method	IS 5182 Part-23 : 2006 (Reaff. 2017)	5 μg/m ³
2	Particulate Matter size less than 2.5 μm (PM2.5), μg/m3	Gravimetric method	EPA- 40 Appendix L To Part 50	5 μg/m³
3	Sulphur Dioxide (SO2), Improved West and Gaeke		IS 5182: Part 2:2001 (Reaff. 2017)	5 µg/m³
4	Nitrogen Dioxide (NO2), µg/m3	Modified Jacob & Hochheiser	IS 5182: Part 6:2006 (Reaff. 2017)	5 µg/m³
5	Ammonia (NH3), μg/m3	GC FID	ABCTL/SOP/A05 Is. No.1 02-01-2015	0.1 μg/m ³
6	VOCs	GC FID	U.S. EPA Method TO17: 1999	0.1 μg/m ³
7	Methane Hydrocarbons (MHC) (MHC) HC Analyzer for Spot Concentration		ABCTL/SOP/A15 Is. No.1 02-01-2015	0.1 μg/m ³
8	Non-Methane Hydrocarbons (NMHC)	HC Analyzer for Spot Concentration	ABCTL/SOP/A15 Is. No.1 02-01-2015	0.1 μg/m ³

1.2 Selection of Sampling Locations:

The baseline status of the ambient air quality has been assessed through a scientifically designed ambient air quality monitoring network. The design of monitoring network in the air quality surveillance program has been based on the following considerations:

- Topography / Terrain of the study area
- History of wind pattern
- Human Settlements
- Health status
- Accessibility of monitoring site
- Resource Availability
- Representativeness of the region for establishing baseline status
- Representativeness with respect to likely impact areas
 - · Air Quality monitoring has been conducted at six sampling locations during season (November 2021 to April 2022). The location of ambient air sampling stations has been presented below in Table 2 & Table 3.

Table 2: Details of sampling locations

S.No.	Location Name	With respect to project site				
		Direction	Distancw			
1	TFL Admin Building	-	-			
2	H.B.Colony	ENE	1.2 km			
3	Karnapur Village	W	4.5 km			
4	TFL Guest House	-	-			
5	Balanda Village	NW	2.5km			
6	Kukudanga Village	SW	2.5km			

Table 3: Details of Air Quality Monitoring Locations (November 2021 to April 2022)

S.No.	Sample Code	Sampling Locations	Geographical Locations
1	TFL/A1	TFL Admin Building	20°54'42.8"N
	II'L/AI	TTL Admin bunding	85°09'38.4"E
2	TFL/A2	H.B.Colony	20°54'19.3"N
	11 11/112	11.D.Colony	85°10'20.4"E
3	TFL/A3	Karnapur Village	20°54'26.4"N
	11 11/11/5	Karnapur vinage	85°07'06.1"E
4	TFL/A4	TFL Guest House	20°54'14.8"N
	11 L//14	II L Guest House	85°09'56.9"E
5	TFL/A5	Balanda Village	20°55'31.0"N
	11 1/113	Dalanda vinage	85°09'26.8"E
6	TFL/A6	Kukudanga Village	20°53'23.3"N
	11 1/110	Trukudanga vinage	85°08'50.8"E

Ambient Air Quality Monitoring Results:

Ambient Air Quality Monitoring Results:

AAQ 1 - TFL Admin Building

Months	PM10		onths PM10 PM2.5 SO2)2	NO2		NH3		VOC	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
March	58	66	27	32	13	19	19	27	11	19	0
NAAQ	100		40 80		80		400				
Standards	100										

AAQ 2 – H.B. Colony

Months	PM10		onths PM10 PM2.5 SO2		NO2		NH3		VOC		
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
March	48	59	22	27	8	14	16	21	10	16	0
NAAQ	Q 100		40		80		80		400		
Standards											

AAQ 3- Village Karnapur

Months	PM10		PM2.5		SO2		NO2		NH3		VOC
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
March	41	51	19	25	8	12	15	21	7	13	0
NAAQ	10	00	4	0	8	0	8	0	4(00	
Standards											

AAQ 4 - TFL Guest House

Months	PM	I 10	PM2.5		SO2		NO2		NH3		VOC
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
March	50	61	24	30	9	18	16	26	14	23	0
NAAQ	10	00	4	0	8	0	8	0	4(00	
Standards											

AAQ 5 - Balanda village

Months	PM	I 10	PM	[2.5	SO2		NO2		NH3		VOC
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
March	43	54	21	26	6	11	14	20	8	17	0
NAAQ	10	00	4	0	8	0	8	0	4(00	
Standards											

AAQ 6 - Kukudanga village

Months	PM	PM10		PM2.5		SO2		NO2		NH3	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
March	50	58	24	30	10	26	17	24	8	18	0
NAAQ	10	00	4	0	8	0	8	0	4(00	
Standards											

AAO Observations:

PM₁₀: The maximum and minimum concentrations for PM₁₀ were recorded as 66 μ g/m³ at TFL Admin Building and 41 μ g/m³ at Karnapur village.

 $PM_{2.5}$: The maximum and minimum concentrations for $PM_{2.5}$ were recorded as $32\mu g/m^3$ at TFL Admin Village and 19 $\mu g/m^3$ at Karnapur village.

SO₂: The maximum and minimum concentrations for SO₂ were recorded as $26.0 \mu g/m^3$ at Kukudanga village and $6.0 \mu g/m^3$ at Karnapur village & Balanda village.

NO₂: The maximum and minimum concentrations for NO₂ were recorded as $27.0\mu g/m^3$ at TFL Admin Building and $14.0\mu g/m^3$ at Balanda village.

NH₃: The maximum and minimum concentrations for NH₃ were recorded as $23.0\mu g/m^3$ at TFL Guest House and $7.0\mu g/m^3$ at Karnapur village.

The overall concentrations of PM₁₀, PM_{2.5}, SO₂, NO₂ and NH₃ were observed to be well within the standards prescribed by Central Pollution Control Board (CPCB) for industraial, Rural, Residential and other area.

Noise Level Monitoring Results:

N1 – TFL Admin Building

Date of	Lmax	Lmin	L day	L Night dB(A)	Leq
Sampling	dB(A)	dB(A)	dB(A)		dB(A)
March	77.3	49.2	60.2-64.8	50.4-57.4	60.1-64.4

N2 – H.B.Colony

Date of Sampling	Lmax	Lmin	L day	L Night	Leq
March	69.8	36.6	52.9-58.2	43.6-49.7	51.7-56.6

N3 – Karnapur Village

Date of Sampling	Lmax	Lmin	L day	L Night	Leq
March	68.9	39.0	51.9-53.8	42.6-45.1	50.4-52.2

N4 – TFL Guest House

Date of Sampling	Lmax	Lmin	L day	L Night	Leq
March	70.4	38.3	51.7-60.0	40.6-47.9	50.1-58.3

N5 – Balanda Village

Date of Sampling	Lmax	Lmin	L day	L Night	Leq
March	67.7	32.7	49.7-58.2	42.8-48.7	48.7-56.6

N6 – Kukudanga Village

Date of Sampling	Lmax	Lmin	L day	L Night	Leq
March	68.7	31.6	51.3-58.8	43.2-48.9	50.0-57.3

Observation:

The Noise level monitoring samplings in the are taken for 8 days for March'22. The above table shows the minimum to maximum range of sample results. Comparing to all the locations, March month shows the highest level of 77.3 dB(A) for Lmax in TFL Admin Building, minimum level of 31.6 dB(A) for L min in Kukudanga Village, and the minimum to maximum range of L day, L night and Leq are shown in the above table.

The detailed sampling monitoring reports for Noise level for March'22 are all within the standard limits and it is enclosed as **Annexure - III**

Ground Water monitoring results:

The Ground Water (GW) level and condition is monitored in 3 different locations (Tentulei Village (GW1), Balanda Village (GW2) and Kukudanga Village (GW3)) on 24.03.2022 for various parameters. From the report, it shows that the sample results for GW1, GW2 & GW3 are within the Acceptable Limits as per IS 10500:2012 and are in **Good** condition. The detailed report is enclosed as **Annexure - III**

Surface Water monitoring results:

The Surface Water (SW) level and condition is monitored in 3 different locations (Pump House (SW1), River near Jatia Bridge (SW2) and River PTBS Thermal Area (SW3)) on 24.03.2022 for various parameters. From the report, it shows that the sample results for SW1, SW2 & SW3 are within the Acceptable Limits as per IS 10500:2012 and are in **Good** condition. The detailed report is enclosed as **Annexure - III**



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ISSUED TO:

TEST REPORT

M/s Talcher Fertilizers Limited., (FCIL, Talcher Unit), Technical Building (JV Site Office) Post- Vikrampur, Dist- Angul (Odisha State) PIN-759 106

Report Number		ABCTL/2022/03/A1					
Sample Drawn by	:	BC Techno Labs India Private Limited					
Sample Description	:	Ambient Air Quality Monitoring					
Location Sampling	1	AAQ 1 - TFL Admin Building					
Date of Sampling	1	03-03-2022 to 29-03-2022					
Sampling method	1	IS 5182 Part 5 & 14					
Report Date	:	07-04-2022	Page 1 of 1				

Test Parameters	Particulate Matter (PM ₁₀), µg/m ³	Particulate Matter (PM _{2.5}), µg/m ³	Sulphur Dioxide (SO ₂), μg/m ³	Nitrogen Dioxide (NO ₂), μg/m ³	Ammonia (NH ₃), μg/m ³	Volatile Organic Compounds (VOC) µg/m ³	Methane HC μg/m³	Non Methane HC µg/m³
Test Methods Date of Sampling	IS 5182 : Part-23	40 CFR Appendix L (Part 50)	IS 5182 : Part 2	IS 5182 : Part 6	ABCTL/ SOP/A/ 05	ABCTL/SOP /A/13	IS 5182 : Part 11	IS 5182 : Part 11
03.03.2022	61	31	15	26	18	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
07.03.2022	58	28	17	21	11	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
10.03.2022	65	32	13	27	19	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
14.03.2022	59	28	19	19	13	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
17.03.2022	66	31	16	23	14	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
21.03.2022	61	29	14	25	16	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
24.03.2022	65	31	18	22	12	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)
29.03.2022	58	27	15	26	17	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)
Min	58	27	13	19	11	0	0	0
Max	66	32	19	27	19	0	0	0
Mean	61.625	29.625	15.875	23.625	15	0	0	0
NAAQ Standards	100	60	80	80	400	Not Specified	Not Specified	Not Specified

BDL-Below Detection Limit

CHENNA

600 098

*National Ambient Air Quality Standards prescribed by Ministry of Environment and Forests, Government of India vide Gazette Notification G.S.R. 826(E) dated 18.11.2009.

.....End of Report.....

S. Dharani Quality Manager

Verified by



J. Hora

A. Robson Chinnadurai Technical Manager-Lab

Authorised Signatory

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ISSUED TO:

TEST REPORT

M/s Talcher Fertilizers Limited., (FCIL, Talcher Unit), Technical Building (JV Site Office) Post- Vikrampur, Dist- Angul (Odisha State) PIN-759 106

Report Number		ABCTL/2022/03/A2	
Sample Drawn by	:	ABC Techno Labs India Private Limited	
Sample Description	:	Ambient Air Quality Monitoring	
Location Sampling	:	AAQ 2 - H.B.Colony	
Date of Sampling	:	03-03-2022 to 29-03-2022	
Sampling method	-:	IS 5182 Part 5 & 14	
Report Date	:	07-04-2022	Page 1 of 1

Test Parameters	Particulate Matter (PM ₁₀), µg/m ³	Particulate Matter (PM _{2.5}), µg/m ³	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), μg/m ³	Ammonia (NH ₃), μg/m ³	Volatile Organic Compounds (VOC) µg/m ³	Methane HC μg/m³	Non Methane HC µg/m³
Test Methods Date of Sampling	IS 5182 : Part-23	40 CFR Appendix L (Part 50)	IS 5182 : Part 2	IS 5182 : Part 6	ABCTL/S OP/A/05	ABCTL/SOP /A/13	IS 5182 : Part 11	IS 5182 : Part 11
03.03.2022	57	26	12	19	14	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
07.03.2022	51	25	9	16	11	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
10.03.2022	56	25	13	17	16	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
14.03.2022	48	22	8	21	10	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
17.03.2022	59	27	14	18	15	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
21.03.2022	52	25	10	20	13	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
24.03.2022	57	26	13	16	16	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)
29.03.2022	51	25	11	18	12	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)
Min	48	22	8	16	10	0	0	0
Max	59	27	14	21	16	0	0	0
Mean	53.875	25.125	11.25	18.125	13.375	0	0	0
NAAQ Standards	100	60	80	80	400	Not Specified	Not Specified	Not Specified

BDL-Below Detection Limit

CHENNAI 600 098

*National Ambient Air Quality Standards prescribed by Ministry of Environment and Forests, Government of India vide Gazette Notification G.S.R. 826(E) dated 18.11.2009.

.....End of Report.....

S. Jatural
S. Dharani
Quality Manager

Verified by



A. Robson Chinnadurai Technical Manager-Lab

Authorised Signatory

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ISSUED TO:

TEST REPORT

M/s Talcher Fertilizers Limited., (FCIL, Talcher Unit), Technical Building (JV Site Office) Post- Vikrampur, Dist- Angul (Odisha State) PIN-759 106

Report Number	:	ABCTL/2022/03/A3	
Sample Drawn by	:	ABC Techno Labs India Private Limited	
Sample Description	:	Ambient Air Quality Monitoring	
Location Sampling	:	AAQ 3 - Karnapur village	
Date of Sampling	:	03-03-2022 to 29-03-2022	
Sampling method	:	IS 5182 Part 5 & 14	
Report Date	:	07-04-2022	Page 1 of 1

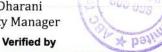
Test Parameters	Particulate Matter (PM ₁₀), μg/m ³	Particulate Matter (PM _{2.5}), µg/m ³	Sulphur Dioxide (SO ₂), μg/m ³	Nitrogen Dioxide (NO ₂), μg/m ³	Ammonia (NH ₃), μg/m ³	Volatile Organic Compounds (VOC) µg/m ³	Methane HC μg/m³	Non Methane HC µg/m³
Test Methods	IS 5182 :	40 CFR	IS 5182 :	IS 5182 :	ABCTL/S	ABCTL/SOP	IS 5182 :	IS 5182 :
Date of Sampling	Part-23	Appendix L (Part 50)	Part 2	Part 6	OP/A/05	/A/13	Part 11	Part 11
03.03.2022	45	22	9	16	9	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
07.03.2022	49	24	11	19	11	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
10.03.2022	43	21	12	18	7	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
14.03.2022	47	23	8	17	9	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
17.03.2022	51	25	11	15	12	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
21.03.2022	42	20	12	19	10	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
24.03.2022	48	23	10	17	13	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)
29.03.2022	41	19	8	21	8	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)
Min	41	19	8	15	7	0	0	0
Max	51	25	12	21	13	0	0	0
Mean	45.75	22.125	10.125	17.75	9.875	0	0	0
NAAQ Standards	100	60	80	80	400	Not Specified	Not Specified	Not Specified

BDL-Below Detection Limit

*National Ambient Air Quality Standards prescribed by Ministry of Environment and Forests, Government of India vide Gazette Notification G.S.R. 826(E) dated 18.11.2009.

.....End of Report.....

S. Dharani Quality Manager





A. Robson Chinnadurai Technical Manager-Lab

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ISSUED TO:

TEST REPORT

M/s Talcher Fertilizers Limited., (FCIL, Talcher Unit), Technical Building (JV Site Office) Post- Vikrampur, Dist- Angul (Odisha State) PIN-759 106

Report Number	:	ABCTL/2022/03/A4	ABCTL/2022/03/A4				
Sample Drawn by	:	ABC Techno Labs India Private Limited					
Sample Description	:	Ambient Air Quality Monitoring					
Location Sampling	:	AAQ 4 - TFL Guest House					
Date of Sampling		03-03-2022 to 29-03-2022					
Sampling method	:	IS 5182 Part 5 & 14					
Report Date		07-04-2022	Page 1 of 1				

Test Parameters	Particulate Matter (PM ₁₀), µg/m ³	Particulate Matter (PM _{2.5}), µg/m ³	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), μg/m ³	Ammonia (NH ₃), μg/m ³	Volatile Organic Compounds (VOC) µg/m³	Methane HC μg/m³	Non Methane HC µg/m³
Test Methods Date of Sampling	IS 5182 : Part-23	40 CFR Appendix L (Part 50)	IS 5182 : Part 2	IS 5182 : Part 6	ABCTL/S OP/A/05	ABCTL/SO P/A/13	IS 5182 : Part 11	IS 5182 : Part 11
03.03.2022	55	26	11	23	10	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
07.03.2022	63	31	14	19	14	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
10.03.2022	57	26	13	24	9	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
14.03.2022	62	29	18	21	13	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
17.03.2022	51	24	13	18	14	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
21.03.2022	61	27	14	22	15	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
24.03.2022	55.5	26	15	20	12	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)
29.03.2022	41	20	17	23	14	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)
Min	50	24	9	16	14	0	0	0
Max	61	30	18	26	23	0	0	0
Mean	55.5	27	13.5	21	18.5	0	0	0
NAAQ Standards	100	60	80	80	400	Not Specified	Not Specified	Not Specified

BDL-Below Detection Limit

*National Ambient Air Quality Standards prescribed by Ministry of Environment and Forests, Government of India vide Gazette Notification G.S.R. 826(E) dated 18.11.2009.

S. Dharani

Quality Manager Verified by



A. Robson Chinnadurai Technical Manager-Lab

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ISSUED TO:

TEST REPORT

M/s Talcher Fertilizers Limited., (FCIL, Talcher Unit), Technical Building (JV Site Office) Post-Vikrampur, Dist-Angul (Odisha State) PIN-759 106

Report Number	:	ABCTL/2022/03/A5	
Sample Drawn by	:	ABC Techno Labs India Private Limited	
Sample Description	1	Ambient Air Quality Monitoring	
Location Sampling	:	AAQ 5 – Balanda Village	
Date of Sampling	:	03-03-2022 to 29-03-2022	
Sampling method	:	IS 5182 Part 5 & 14	
Report Date	:	07-04-2022	Page 1 of 1

Test Parameters	Particulat e Matter (PM ₁₀), μg/m ³	Particulate Matter (PM _{2.5}), μg/m ³	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	Ammonia (NH ₃), μg/m ³	Volatile Organic Compounds (VOC) µg/m ³	Methane HC μg/m³	Non Methane HC µg/m³
Test Methods	IS 5182 :	40 CFR Appendix L	IS 5182 :	IS 5182 :	ABCTL/S	ABCTL/SOP	IS 5182 :	IS 5182 :
Date of Sampling	Part-23	(Part 50)	Part 2	Part 6	OP/A/05	/A/13	Part 11	Part 11
03.03.2022	44	22	7	17	9	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
07.03.2022	51	24	9	15	11	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
10.03.2022	43	21	6	19	8	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
14.03.2022	48	23	11	14	14	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
17.03.2022	54	26	8	18	10	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
21.03.2022	51	24	10	20	15	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
24.03.2022	46	22	8	17	13	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)
29.03.2022	49	24	9	16	17	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)
Min	43	21	6	14	8	0	0	0
Max	54	26	11	20	17	0	0	0
Mean	48.25	23.25	8.5	17	12.125	0	0	0
NAAQ Standards	100	60	80	80	400	Not Specified	Not Specified	Not Specified

BDL-Below Detection Limit

*National Ambient Air Quality Standards prescribed by Ministry of Environment and Forests, Government of India vide Gazette Notification G.S.R. 826(E) dated 18.11.2009.

.....End of Report.....

S. Dharani Quality Manager

S. Inte

Verified by



A. Robson Chinnadurai Technical Manager-Lab

Authorised Signatory

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ISSUED TO:

TEST REPORT

M/s Talcher Fertilizers Limited., (FCIL, Talcher Unit), Technical Building (JV Site Office) Post- Vikrampur, Dist- Angul (Odisha State) PIN-759 106

Report Number	:	ABCTL/2022/03/A6	
Sample Drawn by	:	ABC Techno Labs India Private Limited	
Sample Description	:	Ambient Air Quality Monitoring	
Location Sampling	:	AAQ 6 - Kukudanga village	
Date of Sampling		03-03-2022 to 29-03-2022	
Sampling method	:	IS 5182 Part 5 & 14	
Report Date	:	07-04-2022	Page 1 of 1

Test Parameters	Particulate Matter (PM ₁₀), µg/m ³	Particulate Matter (PM _{2.5}), µg/m ³	Sulphur Dioxide (SO ₂), μg/m ³	Nitrogen Dioxide (NO ₂), μg/m ³	Ammonia (NH ₃), μg/m ³	Volatile Organic Compounds (VOC) µg/m³	Methane HC μg/m³	Non Methane HC μg/m ³
Test Methods	IS 5182 :	40 CFR	IS 5182 :	IS 5182 :	ABCTL/S	ABCTL/SOP/	IS 5182 :	IS 5182 : Part 11
Date of Sampling	Part-23	Appendix L (Part 50)	Part 2	Part 6	OP/A/05	A/13	Part 11	
03.03.2022	51	25	10	20	12	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
07.03.2022	55	30	13	22	9	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
10.03.2022	50	25	26	20	15	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
14.03.2022	51	25	15	24	8	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
17.03.2022	55	27	13	18	13	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
21.03.2022	54	29	11	20	15	BDL(<1.0)	BDL(<0.1)	BDL(<0.1)
24.03.2022	58	26	14	17	18	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)
29.03.2022	55	24	10	20	11	BDL(<1.0)	BDL(<1.0)	BDL(<1.0)
Min	50	24	10	17	8	0	0	0
Max	58	30	26	24	18	0	0	0
Mean	54	27	18	20.5	13	0	0	0
NAAQ Standards	100	60	80	80	400	Not Specified	Not Specified	Not Specified

BDL-Below Detection Limit

*National Ambient Air Quality Standards prescribed by Ministry of Environment and Forests, Government of India vide Gazette Notification G.S.R. 826(E) dated 18.11.2009.

.....End of Report.....

S. Dharani Quality Manager



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TEST REPORT

M/s Talcher Fertilizers Limited., (FCIL, Talcher Unit), Technical Building (JV Site Office) Post- Vikrampur, Dist- Angul (Odisha State) PIN-759 106

Report Number	:	ABCTL/2022/03/N1	
Sample Drawn by	:	ABC Techno Labs India Private Limited	
Sample Description	:	Noise Level Monitoring	
Location Sampling	:	N1 - TFL Admin Building	
Date of Sampling	:	03-03-2022 to 29-03-2022	
Report Date	:	07-04-2022	Page 1 of 1

Date of Sampling	Lmax dB(A)	Lmin dB(A)	L day dB(A)	L Night dB(A)	Leq dB(A)
03.03.2022	73.7	49.2	61.2	53.6	61.0
07.03.2022	70.7	52.5	64.1	55.1	63.9
10.03.2022	73.0	53.7	62.3	54.5	62.2
14.03.2022	70.2	51.5	60.2	53.6	60.1
17.03.2022	70.4	55.0	63.4	57.4	63.4
21.03.2022	73.8	53.6	61.8	50.4	61.5
24.03.2022	72.6	53.5	61.2	52.4	60.9
29.03.2022	77.3	53.0	64.8	51.1	64.4

Ambient Noise Standards Zone Classification	Lday dB(A)	Lnight dB(A)	
Industrial Area	75	70	
Commercial Area	65	55	
Residential Area	55	45	
Silence Zone	50	40	

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M/s Talcher Fertilizers Limited., (FCIL, Talcher Unit), Technical Building (JV Site Office) Post- Vikrampur, Dist- Angul (Odisha State) PIN-759 106

Report Number	:	ABCTL/2022/03/N2			
Sample Drawn by	:	ABC Techno Labs India Private Limited			
Sample Description	:	Noise Level Monitoring			
Location Sampling	:	N2 - H.B. Colony			
Date of Sampling	:	03-03-2022 to 29-03-2022			
Report Date	:	07-04-2022 Page 1 of 1			

Date of Sampling	Lmax dB(A)	Lmin dB(A)	L day dB(A)	L Night dB(A)	Leq dB(A)
03.03.2022	66.1	43.5	53.6	43.6	52.1
07.03.2022	63.8	36.6	55.1	46.9	53.7
10.03.2022	64.7	45.7	55.9	42.9	54.2
14.03.2022	68.8	53.7	55.7	45.0	54.1
17.03.2022	69.8	47.2	58.2	47.2	56.6
21.03.2022	66.0	41.7	55.0	49.7	53.9
24.03.2022	65.1	44.7	55.1	43.5	53.5
29.03.2022	67.2	45.0	52.9	47.3	51.7

Ambient Noise Standards Zone Classification	Lday dB(A)	Lnight dB(A)	
Industrial Area	75	70	
Commercial Area	65	55	
Residential Area	55	45	
Silence Zone	50	40	

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



S. Dharani

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Quality Manager

CUENNAI SA 600 038

J. 21 a

A. Robson Chinnadurai Technical Manager-Lab

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M/s Talcher Fertilizers Limited., (FCIL, Talcher Unit), Technical Building (JV Site Office) Post- Vikrampur, Dist- Angul (Odisha State) PIN-759 106

Report Number	:	ABCTL/2022/03/N3		
Sample Drawn by	:	ABC Techno Labs India Private Limited		
Sample Description	:	Noise Level Monitoring		
Location Sampling	:	N3- Karnapur village		
Date of Sampling	:	03-03-2022 to 29-03-2022		
Report Date	:	07-04-2022 Page 1 of 1		

Date of Sampling	Lmax dB(A)	Lmin dB(A)	L day dB(A)	L Night dB(A)	Leq dB(A)
03.03.2022	62.5	44.3	51.9	43.0	50.4
07.03.2022	65.4	44.8	53.8	43.7	52.2
10.03.2022	63.5	43.8	53.2	44.8	51.7
14.03.2022	61.9	39.8	53.7	42.6	52.1
17.03.2022	64.7	45.8	53.1	45.1	51.6
21.03.2022	62.8	39.9	52.6	44.3	51.1
24.03.2022	66.4	39.0	53.3	42.7	51.7
29.03.2022	68.9	40.9	52.1	44.9	50.7

Ambient Noise Standards Zone Classification	Lday dB(A)	Lnight dB(A)
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

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



S. Dharani Quality Manager

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Report Number	:	ABCTL/2022/03/N4		
Sample Drawn by	:	ABC Techno Labs India Private Limited		
Sample Description	:	Noise Level Monitoring		
Location Sampling	:	N4 – TFL Guest House		
Date of Sampling	:	03-03-2022 to 29-03-2022		
Report Date	:	07-04-2022 Page 1 of 1		

Date of Sampling	Lmax dB(A)	Lmin dB(A)	L day dB(A)	L Night dB(A)	Leq dB(A)
03.03.2022	63.7	45.8	51.7	40.6	50.1
07.03.2022	64.0	43.0	51.8	43.0	50.3
10.03.2022	65.8	44.7	53.6	43.8	52.1
14.03.2022	64.7	44.7	54.1	46.3	52.7
17.03.2022	66.8	46.4	55.2	46.9	53.8
21.03.2022	65.0	38.3	57.5	47.9	55.9
24.03.2022	70.4	43.3	54.6	43.8	53.1
29.03.2022	70.4	46.6	60.0	46.6	58.3

Ambient Noise Standards Zone Classification	Lday dB(A)	Lnight dB(A)
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

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Report Number		ABCTL/2022/03/N5		
Sample Drawn by	:	ABC Techno Labs India Private Limited		
Sample Description	1:	Noise Level Monitoring		
Location Sampling	:	N5 – Balanda Village		
Date of Sampling		03-03-2022 to 29-03-2022		
Report Date		07-04-2022 Page 1 of 1		

Date of Sampling	Lmax dB(A)	Lmin dB(A)	L day dB(A)	L Night dB(A)	Leq dB(A)
03.03.2022	64.8	32.7	54.3	45.2	52.8
07.03.2022	62.1	37.6	52.3	46.9	51.2
10.03.2022	65.9	38.3	49.7	45.5	48.7
14.03.2022	65.1	33.4	55.6	48.7	54.2
17.03.2022	65.8	38.3	52.6	42.8	51.1
21.03.2022	67.7	35.7	58.2	45.8	56.6
24.03.2022	65.7	32.7	53.6	47.4	52.3
29.03.2022	62.1	36.5	55.1	44.4	53.5

Ambient Noise Standards Zone Classification	Lday dB(A)	Lnight dB(A)
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

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TEST REPORT

M/s Talcher Fertilizers Limited., (FCIL, Talcher Unit), Technical Building (JV Site Office) Post- Vikrampur, Dist- Angul (Odisha State) PIN-759 106

Report Number	:	ABCTL/2022/03/N6	
Sample Drawn by	:	ABC Techno Labs India Private Limited	
Sample Description	1	Noise Level Monitoring	
Location Sampling	:	N6 - Kukudanga village	
Date of Sampling	:	03-03-2022 to 29-03-2022	
Report Date	:	07-04-2022 Page 1 of 1	

Date of Sampling	Lmax dB(A)	Lmin dB(A)	L day dB(A)	L Night dB(A)	Leq dB(A)
03.03.2022	68.6	35.0	51.3	44.7	50.0
07.03.2022	64.1	38.8	51.9	43.2	50.4
10.03.2022	64.4	37.7	55.6	44.4	54.0
14.03.2022	62.1	34.3	53.2	46.2	51.8
17.03.2022	64.0	31.6	51.9	43.7	50.4
21.03.2022	65.4	36.7	58.8	48.9	57.3
24.03.2022	68.7	36.4	55.1	43.7	53.5
29.03.2022	66.0	38.2	54.2	46.3	52.7

Ambient Noise Standards Zone Classification	Lday dB(A)	Lnight dB(A)	
Industrial Area	75	70	
Commercial Area	65	55	
Residential Area	55	45	
Silence Zone	50	40	

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



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Page 1 of 2 Sample Details: Sample Drawn By Laboratory ABCTL/2022/03/GW1 Report Number Sampling Method IS: 3025 - Part 1 Sample Description **Ground Water** Date of Receipt 26-03-2022 Location Sampling GW1 - Tentulei Village Analysis commenced on 26-03-2022 Sample Condition Good 07-04-2022 Date of Sampling 24-03-2022 Report Date

S.No	Test Parameters	Test Methods	Unit	Results	Acceptable Limit as per IS 10500:2012
1	Colour	IS 3025 (Part 4)-1983(RA:2017)	Hazen	<1	5
2	Odour	IS 3025 (Part 5)-2018		Agreeable	Agreeable
3	Taste	IS 3025 (Part 8)-1984(RA:2017)	-	Agreeable	Agreeable
4	Turbidity	IS 3025 (Part 10)-1984(RA:2017)	NTU	0.8	1
5	pH at 25 °C	IS 3025 (Part 11)-1983(RA:2017)	=	7.66	6.5-8.5
6	Total dissolved solids	IS 3025 (Part 16)-1984 (RA: 2017)	mg/l	319	500
7	Total suspended Solids	IS: 3025 Part 17-1984 (Reaff: 2017)	mg/l	BDL(<2)	Not specified
8	Temperature	APHA 23rd EDITION 2550 B	°C	27.6	Not specified
9	P Alkalinity as CaCO3	IS 3025 (Part 23)- 1986(RA:2019)	mg/l	BDL(< 1)	Not specified
10	Total Alkalinity as CaCO3	IS 3025 (Part 23)- 1986(RA:2019)	mg/l	124	200
11	Chloride as Cl-	IS 3025 (Part 32)-1988 (RA: 2019)	mg/l	86	250
12	Sulphate as SO4	APHA 23rd Edition -4500-SO42- E	mg/l	30	200
13	Nitrate as NO3	APHA 23rd Edition -4500- NO3- B	mg/l	4	45
14	Fluoride as F	APHA 23rd Edition -4500-F B&D	mg/l	0.16	1
15	Total Hardness as CaCO3	IS 3025 (Part 21)-2009(RA:2019)	mg/l	152	200
16	Calcium Hardness as Ca	IS 3025 (Part 40)-1991 (RA:2019)	mg/l	38	75
17	Magnesium Hardness as Mg	APHA 23rd Edition-3500 Mg B	mg/l	13.8	30

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TEST REPORT

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Report no	:	ABCTL/2022/03/GW1	
Sample description	:	GW1 - Tentulei Village	
Date of report	:	07-04-2022	Page 2 of 2

S.No	Test Parameters	Test Methods	Unit	Results	Acceptable Limit as per IS 10500:2012
18	Sodium as Na	IS: 3025 Part 45-1993 (Reaff:2019)	mg/l	56	Not specified
19	Potassium as K	IS: 3025 Part 45-1993 (Reaff:2019)	mg/l	2	Not specified
20	Silica as SiO2	APHA 23rd Edition -4500-SiO2- D	mg/l	15.4	Not specified
21	Iron as Fe	IS 3025 (Part 53)-1987 (RA:2019)	mg/l	0.10	1
22	Manganese as Mn	APHA 23rd Edition -3111B	mg/l	BDL(< 0.01)	0.1
23	Total Chromium as Cr	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.05
24	Lead as Pb	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.01
25	Zinc as Zn	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	5
26	Cadmium as Cd	IS 3025 (Part 65)-2014	mg/l	BDL(<0.003)	0.003
27	Copper as Cu	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.05
28	Nickel as Ni	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.02
29	Arsenic as As	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.01
30	Oil & Grease	IS:3025:Part39:1991(Reaff:2019)	mg/l	BDL(< 1)	Not specified
Microl	piology Parameter:				
31	Total Coliforms	IS 1622 -1981 RA 2019	MPN/ 100ml	<2	(*)

Note: BDL - Below Detection Limit, <2 MPN/100 ml can be taken as "Absent"

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



S. Dharani Quality Manager

Verified by

w Krishna Mooruny
Head - Microbiology



A. Robson Chinnadurai Technical Manager-Lab

Authorised Signatory

Terms and conditions :



ABC TOWER #400, 13th Street, SIDCO Industrial Estate - North Phase, Ambattur, Chennai - 600 098, Tamilnadu, INDIA. Ph: +91-44-2625 7788 / 99, +91 94442 60000 / 95661 87777 Email: lab@abctechnolab.com / Web: www.abctechnolab.com



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ISSUED TO:

TEST REPORT

M/s Talcher Fertilizers Limited., (FCIL, Talcher Unit), Technical Building (JV Site Office) Post-Vikrampur, Dist-Angul (Odisha State) PIN-759 106

Page 1 of 2 Sample Details:

Jampie Details.			- 0
Report Number	ABCTL/2022/03/GW2	Sample Drawn By	Laboratory
Sample Description	Ground Water	Sampling Method	IS: 3025 - Part 1
Location Sampling	GW2 - Balanda Village	Date of Receipt	26-03-2022
Sample Condition	Good	Analysis commenced on	26-03-2022
Date of Sampling	24-03-2022	Report Date	07-04-2022

S.No	Test Parameters	Test Methods	Unit	Results	Acceptable Limit as per IS 10500:2012
1	Colour	IS 3025 (Part 4)-1983(RA:2017)	Hazen	1	5
2	Odour	IS 3025 (Part 5)-2018	-	Agreeable	Agreeable
3	Taste	IS 3025 (Part 8)-1984(RA:2017)	-	Agreeable	Agreeable
4	Turbidity	IS 3025 (Part 10)-1984(RA:2017)	NTU	BDL(<0.5)	1
5	pH at 25 °C	IS 3025 (Part 11)-1983(RA:2017)	-	7.66	6.5-8.5
6	Total dissolved solids	IS 3025 (Part 16)-1984 (RA: 2017)	mg/l	374	500
7	Total suspended Solids	IS:3025 Part 17-1984 (Reaff: 2017)	mg/l	BDL(<2)	Not specified
8	Temperature	APHA 23rd EDITION 2550 B	°C	27.4	Not specified
9	P Alkalinity as CaCO3	IS 3025 (Part 23)- 1986(RA:2019)	mg/l	BDL(<1)	Not specified
10	Total Alkalinity as CaCO3	IS 3025 (Part 23)- 1986(RA:2019)	mg/l	150	200
11	Chloride as Cl-	IS 3025 (Part 32)-1988 (RA: 2019)	mg/l	105	250
12	Sulphate as SO4	APHA 23rd Edition -4500-SO42- E	mg/l	36	200
13	Nitrate as NO3	APHA 23rd Edition -4500- NO3- B	mg/l	7	45
14	Fluoride as F	APHA 23rd Edition -4500-F B&D	mg/l	0.26	1
15	Total Hardness as CaCO3	IS 3025 (Part 21)-2009(RA:2019)	mg/l	168	200
16	Calcium Hardness as Ca	IS 3025 (Part 40)-1991 (RA:2019)	mg/l	51	75
17	Magnesium Hardness as Mg	APHA 23rd Edition-3500 Mg B	mg/l	9.8	30

Contd.....



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TEST REPORT

M/s Talcher Fertilizers Limited., (FCIL, Talcher Unit), Technical Building (JV Site Office) Post- Vikrampur, Dist- Angul (Odisha State) PIN-759 106

Report no	:	ABCTL/2022/03/GW2	=
Sample description	:	GW2 - Balanda Village	
Date of report	:	07-04-2022	Page 2 of 2

S.No	Test Parameters	Test Methods	Unit	Results	Acceptable Limit as per IS 10500:2012
18	Sodium as Na	IS: 3025 Part 45-1993 (Reaff:2019)	mg/l	78	Not specified
19	Potassium as K	IS: 3025 Part 45-1993 (Reaff:2019)	mg/l	2.1	Not specified
20	Silica as SiO2	APHA 23rd Edition -4500-SiO2- D	mg/l	19	Not specified
21	Iron as Fe	IS 3025 (Part 53)-1987 (RA:2019)	mg/l	0.07	1
22	Manganese as Mn	APHA 23rd Edition -3111B	mg/l	BDL(< 0.01)	0.1
23	Total Chromium as Cr	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.05
24	Lead as Pb	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.01
25	Zinc as Zn	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	5
26	Cadmium as Cd	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.003)	0.003
27	Copper as Cu	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.05
28	Nickel as Ni	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.02
29	Arsenic as As	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.01
30	Oil & Grease	IS:3025:Part39:1991(Reaff:2019)	mg/l	BDL(<1)	Not specified
Microl	oiology Parameter:				
31	Total Coliforms	IS 1622 -1981 RA 2019	MPN/ 100ml	<2	-

Note: BDL - Below Detection Limit, <2 MPN/100 ml can be taken as "Absent"

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



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M/s Talcher Fertilizers Limited., (FCIL, Talcher Unit), Technical Building (JV Site Office) Post- Vikrampur, Dist- Angul (Odisha State) PIN-759 106

Sample Details: Page 1 of 2

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Report Number	ABCTL/2022/03/GW3	Sample Drawn By	Laboratory
Sample Description	Ground Water	Sampling Method	IS: 3025 - Part 1
Location Sampling	GW3 - Kukudang Village	Date of Receipt	26-03-2022
Sample Condition	Good	Analysis commenced on	26-03-2022
Date of Sampling	24-03-2022	Report Date	07-04-2022

S.No	Test Parameters	Test Methods	Unit	Results	Acceptable Limit as per IS 10500:2012
1	Colour	IS 3025 (Part 4)-1983(RA:2017)	Hazen	<1	5
2	Odour	IS 3025 (Part 5)-2018	-	Agreeable	Agreeable
3	Taste	IS 3025 (Part 8)-1984(RA:2017)	-	Agreeable	Agreeable
4	Turbidity	IS 3025 (Part 10)-1984(RA:2017)	NTU	BDL(<0.5)	1
5	pH at 25 °C	IS 3025 (Part 11)-1983(RA:2017)	-	7.38	6.5-8.5
6	Total dissolved solids	IS 3025 (Part 16)-1984 (RA: 2017)	mg/l	352	500
7	Total suspended Solids	IS: 3025 Part 17-1984 (Reaff: 2017)	mg/l	BDL(<2)	Not specified
8	Temperature	APHA 23rd EDITION 2550 B	°C	28	Not specified
9	P Alkalinity as CaCO3	IS 3025 (Part 23)- 1986(RA:2019)	mg/l	BDL(< 1)	Not specified
10	Total Alkalinity as CaCO3	IS 3025 (Part 23)- 1986(RA:2019)	mg/l	130	200
11	Chloride as Cl-	IS 3025 (Part 32)-1988 (RA: 2019)	mg/l	98	250
12	Sulphate as SO4	APHA 23rd Edition -4500-SO42- E	mg/l	25	200
13	Nitrate as NO3	APHA 23rd Edition -4500- NO3- B	mg/l	4	45
14	Fluoride as F	APHA 23rd Edition -4500-F B&D	mg/l	0.22	1
15	Total Hardness as CaCO3	IS 3025 (Part 21)-2009(RA:2019)	mg/l	140	200
16	Calcium Hardness as Ca	IS 3025 (Part 40)-1991 (RA:2019)	mg/l	46	75
17	Magnesium Hardness as Mg	APHA 23rd Edition-3500 Mg B	mg/l	10.2	30

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A. Robson Chinnadurai Technical Manager-Lab

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TEST REPORT

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Report no	:	ABCTL/2022/03/GW3	
Sample description	:	GW3 - Kukudang Village	
Date of report	:	07-04-2022	Page 2 of 2

S.No	Test Parameters	Test Methods	Unit	Results	Acceptable Limit as per IS 10500:2012
18	Sodium as Na	IS: 3025 Part 45-1993 (Reaff:2019)	mg/l	65	Not specified
19	Potassium as K	IS: 3025 Part 45-1993 (Reaff:2019)	mg/l	2.1	Not specified
20	Silica as SiO2	APHA 23rd Edition -4500-SiO2- D	mg/l	23	Not specified
21	Iron as Fe	IS 3025 (Part 53)-1987 (RA:2019)	mg/l	0.13	1
22	Manganese as Mn	APHA 23rd Edition -3111B	mg/l	BDL(< 0.01)	0.1
23	Total Chromium as Cr	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.05
24	Lead as Pb	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.01
25	Zinc as Zn	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	5
26	Cadmium as Cd	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.003)	0.003
27	Copper as Cu	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.05
28	Nickel as Ni	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.02
29	Arsenic as As	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.01
30	Oil & Grease	IS:3025:Part39:1991(Reaff:2019)	mg/l	BDL(< 1)	Not specified
	piology Parameter:				
31	Total Coliforms	IS 1622 -1981 RA 2019	MPN/ 100ml	< 2	-

Note: BDL - Below Detection Limit, <2 MPN/100 ml can be taken as "Absent"

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



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Sample Details

Page 1 of 2

Janipie Details.			
Report Number	ABCTL/2022/03/SW1	Sample Drawn By	Laboratory
Sample Description	Surface Water	Sampling Method	IS: 3025 - Part 1
Location Sampling	SW1 - Pump House	Date of Receipt	26-03-2022
Sample Condition	Good	Analysis commenced on	26-03-2022
Date of Sampling	24-03-2022	Report Date	07-04-2022

S.No	Test Parameters	Test Methods	Unit	Results	Acceptable Limit as per IS 10500:2012
1	Colour	IS 3025 (Part 4)-1983(RA:2017)	Hazen	5	5
2	Turbidity	IS 3025 (Part 10)-1984(RA:2017)	NTU	2.3	1
3	pH at 25 °C	IS 3025 (Part 11)-1983(RA:2017)	170	7.69	6.5-8.5
4	Total dissolved solids	IS 3025 (Part 16)-1984 (RA: 2017)	mg/l	214	500
5	Total suspended Solids	IS: 3025 Part 17-1984 (Reaff: 2017)	mg/l	4	Not Specified
6	Temperature	APHA 23rd EDITION 2550 B	°C	28.3	Not Specified
7	Total Alkalinity as CaCO3	IS 3025 (Part 23)- 1986(RA:2019)	mg/l	78	200
8	Chloride as Cl-	IS 3025 (Part 32)-1988 (RA: 2019)	mg/l	53	250
9	Sulphate as SO4	APHA 23rd Edition -4500-SO42- E	mg/l	14	200
10	Nitrate as NO3	APHA 23rd Edition -4500- NO3- B	mg/l	2	45
11	Fluoride as F	APHA 23rd Edition -4500-F B&D	mg/l	0.15	1
12	Total Hardness as CaCO3	IS 3025 (Part 21)-2009(RA:2019)	mg/l	90	200
13	Calcium Hardness as Ca	IS 3025 (Part 40)-1991 (RA:2019)	mg/l	26	75
14	Magnesium Hardness as Mg	APHA 23rd Edition-3500 Mg B	mg/l	6	30
15	Dissolved Oxygen	IS:3025:Part-38:1989 (Reaff:2019)	mg/l	6.7	Not Specified
16	COD	IS:3025:Part-58:2006(Reaff:2017)	mg/l	14	Not Specified
17	BOD	IS:3025:Part-44:1993 (Reaff:2019)	mg/l	BDL(<2)	Not Specified

Contd.....



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Report no	ABCTL/2022/03/SW1	
Sample description	SW1 - Pump House	
Date of report	07-04-2022	Page 2 of 2

S.No	Test Parameters	Test Methods	Unit	Results	Acceptable Limit as per IS 10500:2012
18	Sodium as Na	IS: 3025 Part 45-1993 (Reaff:2019)	mg/l	. 37	Not Specified
19	Potassium as K	IS: 3025 Part 45-1993 (Reaff:2019)	mg/l	2	Not Specified
20	Iron as Fe	IS 3025 (Part 53)-1987 (RA:2019)	mg/l	0.16	1
21	Manganese as Mn	APHA 23rd Edition -3111B	mg/l	BDL(< 0.01)	0.1
22	Total Chromium as Cr	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.05
23	Lead as Pb	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.01
24	Zinc as Zn	IS 3025 (Part 65)-2014	mg/l	0.05	5
25	Cadmium as Cd	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.003)	0.003
26	Copper as Cu	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.05
27	Nickel as Ni	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.02
28	Arsenic as As	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.01
29	Oil & Grease	IS:3025:Part39:1991(Reaff:2019)	mg/l	BDL(< 1)	Not Specified
Microb	piology Parameter:				
30	Total Coliforms	IS 1622 -1981 RA 2019	MPN/ 100ml	170	-

Note: BDL - Below Detection Limit.

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



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Sample Details:

Page 1 of 2

Report Number	ABCTL/2022/03/SW2	Sample Drawn By	Laboratory
Sample Description	Surface Water	Sampling Method	IS: 3025 - Part 1
Location Sampling	SW2- River Near Jatia Bridge	Date of Receipt	26-03-2022
Sample Condition	Good	Analysis commenced on	26-03-2022
Date of Sampling	24-03-2022	Report Date	07-04-2022

S.No	Test Parameters	Test Methods	Unit	Results	Acceptable Limit as per IS 10500:2012
1	Colour	IS 3025 (Part 4)-1983(RA:2017)	Hazen	70	5
2	Turbidity	IS 3025 (Part 10)-1984(RA:2017)	NTU	8.3	1
3	pH at 25 °C	IS 3025 (Part 11)-1983(RA:2017)	201	7.92	6.5-8.5
4	Total dissolved solids	IS 3025 (Part 16)-1984 (RA: 2017)	mg/l	335	500
5	Total suspended Solids	IS: 3025 Part 17-1984 (Reaff: 2017)	mg/l	12	Not Specified
6	Temperature	APHA 23rd EDITION 2550 B	°C	28.6	Not Specified
7	Total Alkalinity as CaCO3	IS 3025 (Part 23)- 1986(RA:2019)	mg/l	100	200
8	Chloride as Cl-	IS 3025 (Part 32)-1988 (RA: 2019)	mg/l	87	250
9	Sulphate as SO4	APHA 23rd Edition -4500-SO42- E	mg/l	28	200
10	Nitrate as NO3	APHA 23rd Edition -4500- NO3- B	mg/l	15	45
11	Fluoride as F	APHA 23rd Edition -4500-F B&D	mg/l	0.17	1
12	Total Hardness as CaCO3	IS 3025 (Part 21)-2009(RA:2019)	mg/l	138	200
13	Calcium Hardness as Ca	IS 3025 (Part 40)-1991 (RA:2019)	mg/l	42	75
14	Magnesium Hardness as Mg	APHA 23rd Edition-3500 Mg B	mg/l	8	30 .
15	Dissolved Oxygen	IS:3025:Part-38:1989 (Reaff:2019)	mg/l	5.5	Not Specified
16	COD	IS:3025:Part-58:2006(Reaff:2017)	mg/l	24	Not Specified
17	BOD	IS:3025:Part-44:1993 (Reaff:2019)	mg/l	3.4	Not Specified

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Report no	100	ABCTL/2022/03/SW2	
Sample description	:	SW2- River Near Jatia Bridge	
Date of report	:	07-04-2022	Page 2 of 2

S.No	Test Parameters	Test Methods	Unit	Results	Acceptable Limit as per IS 10500:2012
18	Sodium as Na	IS: 3025 Part 45-1993 (Reaff:2019)	mg/l	. 64	Not Specified .
19	Potassium as K	IS: 3025 Part 45-1993 (Reaff:2019)	mg/l	3	Not Specified
20	Iron as Fe	IS 3025 (Part 53)-1987 (RA:2019)	mg/l	0.28	1
21	Manganese as Mn	APHA 23rd Edition -3111B	mg/l	BDL(< 0.01)	0.1
22	Total Chromium as Cr	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.05
23	Lead as Pb	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.01
24	Zinc as Zn	IS 3025 (Part 65)-2014	mg/l	0.15	5
25	Cadmium as Cd	IS 3025 (Part 65)-2014	mg/l	BDL(<0.003)	0.003
26	Copper as Cu	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.05
27	Nickel as Ni	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.02
28	Arsenic as As	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.01
29	Oil & Grease	IS:3025:Part39:1991(Reaff:2019)	mg/l	BDL(< 1)	Not Specified
Microl	biology Parameter:				
30	Total Coliforms	IS 1622 -1981 RA 2019	MPN/ 100ml	>1600	-

Note: BDL - Below Detection Limit.

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



S. Dharani

Quality Manager

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> Sample Details: Page 1 of 2

Report Number	ABCTL/2022/03/SW3	Sample Drawn By	Laboratory
Sample Description	Surface Water	Sampling Method	IS: 3025 - Part 1
Location Sampling	SW3 - River PTBS Thermal Area	Date of Receipt	26-03-2022
Sample Condition	Good	Analysis commenced on	26-03-2022
Date of Sampling	24-03-2022	Report Date	07-04-2022

S.No	Test Parameters	Test Methods	Unit	Results	Acceptable Limit as per IS 10500:2012
1	Colour	IS 3025 (Part 4)-1983(RA:2017)	Hazen	8	5
2	Turbidity	IS 3025 (Part 10)-1984(RA:2017)	NTU	2.7	1
3	pH at 25 °C	IS 3025 (Part 11)-1983(RA:2017)	=	7.61	6.5-8.5
4	Total dissolved solids	IS 3025 (Part 16)-1984 (RA: 2017)	mg/l	240	500
5	Total suspended Solids	IS: 3025 Part 17-1984 (Reaff: 2017)	mg/l	5	Not Specified
6	Temperature	APHA 23rd EDITION 2550 B	°C	27.6	Not Specified
7	Total Alkalinity as CaCO3	IS 3025 (Part 23)- 1986(RA:2019)	mg/l	80	200
8	Chloride as Cl-	IS 3025 (Part 32)-1988 (RA: 2019)	mg/l	76	250
9	Sulphate as SO4	APHA 23rd Edition -4500-SO42- E	mg/l	15	200
10	Nitrate as NO3	APHA 23rd Edition -4500- NO3- B	mg/l	5	45
11	Fluoride as F	APHA 23rd Edition -4500-F B&D	mg/l	0.12	1
12	Total Hardness as CaCO3	IS 3025 (Part 21)-2009(RA:2019)	mg/l	100	200
13	Calcium Hardness as Ca	IS 3025 (Part 40)-1991 (RA:2019)	mg/l	30	75
14	Magnesium Hardness as Mg	APHA 23rd Edition-3500 Mg B	mg/l	6	30
15	Dissolved Oxygen	IS:3025:Part-38:1989 (Reaff:2019)	mg/l	6.4	Not Specified
16	COD	IS:3025:Part-58:2006(Reaff:2017)	mg/l	14	Not Specified
17	BOD	IS:3025:Part-44:1993 (Reaff:2019)	mg/l	BDL(<2)	Not Specified

Contd.....



S. Dharani Quality Manager

Verified by



A. Robson Chinnadurai Technical Manager-Lab

Authorised Signatory

[•]The test results relate only to the items tested. • The test report shall not be reproduced in full or part without the written approval of ABCTL. • The test items will not be retained for more than 15 days from the date of issue of test report for Non-Perishable samples and in the case of Perishable samples test items will be retained for one day after date of issue of report. The laboratory's responsibility under this report is limited to proven willful negligence and will in no case be more than the invoiced amount. • The test report is issued for the purpose of identifying the characteristic and not intended to use for any publicity / litigation purpose.



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Accredited by NABL, ISO/IEC 17025:2017, NABET / QCI, Approved by FSSAI Recognised by MoEF&CC, BIS, APEDA

ISSUED TO:

TEST REPORT

M/s Talcher Fertilizers Limited., (FCIL, Talcher Unit), Technical Building (JV Site Office) Post-Vikrampur, Dist-Angul (Odisha State) PIN-759 106

Report no	:	ABCTL/2022/03/SW3	
Sample description	:	SW3 - River PTBS Thermal Area	
Date of report	:	07-04-2022	Page 2 of 2

S.No	Test Parameters	Test Methods	Unit	Results	Acceptable Limit as per IS 10500:2012
18	Sodium as Na	IS: 3025 Part 45-1993 (Reaff:2019)	mg/l	52	Not Specified
19	Potassium as K	IS: 3025 Part 45-1993 (Reaff:2019)	mg/l	2.1	Not Specified
20	Iron as Fe	IS 3025 (Part 53)-1987 (RA:2019)	mg/l	0.17	1
21	Manganese as Mn	APHA 23rd Edition -3111B	mg/l	BDL(< 0.01)	0.1
22	Total Chromium as	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.05
23	Lead as Pb	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.01
24	Zinc as Zn	IS 3025 (Part 65)-2014	mg/l	80.0	5
25	Cadmium as Cd	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.003)	0.003
26	Copper as Cu	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.05
27	Nickel as Ni	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.02
28	Arsenic as As	IS 3025 (Part 65)-2014	mg/l	BDL(< 0.01)	0.01
29	Oil & Grease	IS:3025:Part39:1991(Reaff:2019)	mg/l	BDL(<1)	Not Specified
	piology Parameter:				
30	Total Coliforms	IS 1622 -1981 RA 2019	MPN/ 100ml	1100	•

BDL - Below Detection Limit.

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



S. Dharani Quality Manager

Verified by





A. Robson Chinnadurai Technical Manager-Lab

Authorised Signatory

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ANNEXURE - IV

The project proponent shall inform the public that the project has been accorded Advertisement of environmental clearance by the Ministry has been advertised in two local newspapers in which one is the vernacular language of the locality concerned.



