

तालचेर फर्टिलाइजर्स लिमिटेड Talcher Fertilizers Limited

[Erstwhile Rashtriya Coal Gas Fertilizers Limited] निगमिस पहचान क्रमांक / Corporate Identification Number (CIN) : U24120OR2015PLC019575

TFL/Talcher/ADGF/12/2022/716

07.12.2022

The Additional Director General of Forests (C), Ministry of Environment, Forests and Climate Change, Regional Office (EZ), A/3 Chandersekharpur, Bhubaneswar- 751023 Odisha.

Sub: Submission of six-monthly compliance report pertaining to M/S Talcher Fertilizers Ltd. For setting up Ammonia & Urea Fertilizer Plant at Village-Vikrampur, Tahsil- Talcher, District- Angul, Odisha.

Ref: File No. J-11011/231/2013-IA-II(I), MoEF&CC (IA-II Section)

Environmental Clearance dated 09.02.2018

Dear Sir,

Reference to the above subject, we have obtained Environmental Clearance on 09.02.2018 vide reference cited. To comply certain conditions of the said EC, we herewith submitting half yearly compliance report of the conditions imposed in the said EC issued for the said project for the period of May, 2022 to October, 2022.

We request you to acknowledge the receipt of the same.

Thanking you,

Yours faithfully,

Soumya Kaunti Kar (Soumya Kanti Kar) Manager, Talcher Fertilizers Limited Soumyakanti Kar Manager (PE)

Copy to:

- 1. Member Secretary, Odisha Pollution Control Board, Parivesh Bhawan, A/118, Nilakanlha Nagar, Unit VII, Bhubaneswar 12 (Odisha).
- 2. Zonal Office, CPCB, Kolkata.
- 3. Regional Office, OSPCB, Angul S-3/3, Industrial Estate, Angul-759143, Odisha.

SIX-MONTHS COMPLIANCE STATUS REPORT May 2022 – October 2022

TALCHER FERTILIZERS LIMITED VILLAGE - VIKRAMPUR THESIL - 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)



ABC TOWER, No:400, 13th Street, SIDCO Industrial Estate - North Phase, Ambattur, Chennai - 600 098. P.No: +91- 44 - 2625 7788 / 7799.



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INTRIDUCTION

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).

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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	•Monitoring of PM ₁₀ has been completed for the period November 2021 to April 2022
	collected to confirm the consistency of readings/values, and for suggesting	•Copy of the same is enclosed in this report.
2	mitigating measures accordingly.	A d 2 1 1 1 11 21 1
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	Plants will be designed with state of Art technologies with inbuilt pollution control

	installed to meet the prescribed norms and/or the NMQS. The gaseous emissions shall be dispersed through stack of adequate	systems so that the prescribe norms and 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: a) Metering and control of quantities of	Compliance Assured.		
	active ingredients to minimize waste.b) Reuse of by-products from the process as raw materials or as raw material	Compliance Assured.		
	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	CSR dept. will keep aside a sum for CSR activities for project to meet public hearing requirement to the practical extent possible for an		
	satisfactorily implemented.	industrial unit.		
18	At least 2.5% of the total project cost shall be allocated for Enterprise Social Commitment	Compliance Assured.		
	based on Public Hearing issues and item-wise			

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	Compliance Assured.
	enclosure shall be provided to DG set for controlling the noise pollution,	
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 stipulations made by the State Pollution Control	Compliance Assured.
	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 conditions imposed and to add additional environmental protection measures required, if any.	Compliance Assured.
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. 926(E) data d 16th Manager - 2000 -1-11-1	
	No. 826(E) dated 16th November, 2009 shall be	
5	followed, The overall noise levels in and around the	C 1: A 1
3		Compliance Assured.
	plant area shall be kept well within the standards by providing noise control	
	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).	
6	The Company shall harvest rainwater from the	Compliance Accurad
0	roof tops of the buildings and storm water	Compliance Assured.
	drains to recharge the ground water and use the	
	same water for the process activities of the project	
	to conserve fresh water.	
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	Compliance Assured.
0	environmental protection measures and	Compilance Assured.
	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.	
9	The company shall undertake all relevant	CSR activities shall be undertaken by involving
	measures for improving the socioeconomic	
	conditions of the surrounding area. ESC	
	activities shall be undertaken by involving local	
<u></u>	villages and administration.	
10	The company shall undertake eco	Greenery development in the area will be
	developmental measures including	undertaken. Activities shall be undertaken
	community welfare measures in the project	for Developmental measures for welfare
	area for the overall improvement of the	of overall environment.
	environment.	
11	The. company shall earmark sufficient funds	Compliance Assured.
	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	
10	diverted for any other purpose,	
12	A copy of the clearance letter shall be sent by the	Complied.
	project proponent to concerned	

	D11 7:11- D:-11 /M:1	
	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	Compliance assured.
	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.	
14	The environmental statement for each	This will be complied after
17	financial year ending 31st March in Form-V as is	commencement of commercial
	mandated shall be submitted to the	production.
		production.
	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,	
15	The project proponent shall inform the public that	Compliance done. Communicated on In local
	the project has been accorded	Odiya newspaper and English newspaper. i)
	environmental clearance by the Ministry and	Oriya on date 16.02.2018 in Samaj (Angul
	copies of the clearance letter are available with	Edition) ii) English on date 15.02.2018 in New
	the SPCB/Committee and may also be seen at	Indian Express (Bhubaneswar Edition) Copy
	Website of the Ministry at http://moef.nic.in.	of the same has been submitted already.
	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.	
16	The project authorities shall inform the	This will be complied with. Presently, the
10	Regional Office as well as the Ministry, the date	
	of financial closure and final approval of the	site preparation work is under progress.
	* *	
	project by the concerned authorities and	
	the date of start of the project.	

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 underc-
- (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)
- The Secretary, Department of Forest and Environment, Government of Odisha, Bhubaneswar (Odisha)
- 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.

Annexure II Consent to Establish



Tel: 2564033/2563924 EPABX: 2561909/2562847

E-mail: paribesh1@ospcboard.org Web site: www.ospcboard.org

OFFICE OF THE

STATE POLLUTION CONTROL BOARD, ODISHA

(Department of Forest & Environment, Govt. of Odisha) Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII Bhubaneswar - 751012

Through online/ By Speed Post

No. 12951 /IND-II-NOC-6253

Date 30.11.2019

OFFICE MEMORANDUM

In consideration of the application no. 2324926 received through online for obtaining Consent to Establish for M/s Talcher Fertilizers Ltd. (TFL), the State Pollution Control Board is pleased to convey its Consent to Establish under Section 25 of Water (Prevention & Control of Pollution) Act, 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 for following production/unit capacity:

SI. No.	Name of the facility	Capacity		
1.	Ammonia	2200 MTPD		
2.	Urea (Neem Coated)	3850 MTPD		
3.	Coal Gasification Plant	Synthesis Gas: 242978 Nm ³ /hr		

with project cost of ₹ 13,277.00 Crores over an area of 490.7 acres, At - Talcher, P.O. -Vikrampur (as per plot nos. & Khata nos. mentioned in Application Form) in the District of Angul with following conditions:

GENERAL CONDITIONS:

- 1. This Consent to Establish is valid for the raw materials, product, manufacturing process and capacity mentioned in the application form. This order is valid for five years. The proponent shall commence construction of the project within a period of five years from the date of issue of this order. If the proponent fails to do substantial physical progress of the project within five years then a renewal of this Consent to Establish shall be sought by the proponent.
- 2. The industry shall comply to the provisions of Environment Protection Act, 1986 and the rules made there under with their amendments from time to time such as the Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 as amended from time to time, Hazardous Chemical Rules, / Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 etc. and amendments there under. The industry shall also comply to the provisions of Public Liability Insurance Act, 1991, if applicable.
- 3. The Industry is to apply for grant of Consent to Operate under Section 25/26 of Water (Prevention & Control of Pollution) Act, 1974 & Air (Prevention & Control of Pollution) Act, 1981 at least 3 (three) months before the commercial production and obtain Consent to Operate from this Board.

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4. This Consent to Establish is subject to statutory and other clearances from Govt. of Odisha and / or Govt. of India as and when applicable.

SPECIAL CONDITIONS:

A. GENERAL:

- The proponent shall carryout construction activity of the proposed Fertilizer Plant as per Environmental Clearance granted by MoEF&CC, Govt. of India, vide No. J-11011/231/2013-IA-II (I), date 09.02.2018.
- 2. This Consent to Establish is granted for the capacity as mentioned above and any expansion in the capacity, change or modification in the process, addition, alternation any nature has to be undertaken with prior approval of the Board. For any change in the site or area, fresh Consent to Establish has to be obtained from the Board. The proponent shall carry out construction activity as per approved revised lay out map (enclosed). If the proponent wants to change the approved plant layout map, they can submit a modified plant layout map with adequate justification for such modification.
- 3. The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of Environment Impact Assessment (EIA) report and project report.
- 4. The proponent shall obtain permission from concerned authorities for drawal of surface water / ground water.
- 5. The proponent shall identify the old contaminated sites of old plant and shall remediate the same before start of construction of new plant facilities.
- 6. A relatively thick green coverage may be provided on the north-west and east sides of the plant keeping in view the high noise and dust level.
- 7. At least 5% of the total energy use (plant & colony) shall be from non-conventional sources.
- 8. Good housekeeping practices shall be followed to improve the work environment. All roads and shop floors shall be cleaned regularly.
- The construction and demolition wastes to be generated from the proposed project shall be disposed of in accordance with the provision under "Construction & Demolition Wastes Management Rules 2016".
- The proponent shall comply to the provisions of E-Waste (Management) Rules,
 2016 and shall handover e-waste to authorized collection centers/ register dismantlers/ recyclers for proper disposal of e-waste.
- 11. All the plastic waste generated from industry during construction and commissioning shall be collected and sent for co-processed in a cement kiln.
- 12. Monitoring of stack emissions, fugitive emissions, trade effluent and noise level shall be done as per CPCB regulations.
- 13. The unit shall explore the transportation of raw materials and products through rail instead of trucks.

- 14. A green belt of adequate width and density preferably with local species along the periphery of the unit shall be raised so as to provide protection against particulates and noise. It must be ensured that at least 33% (163.9 acres) as proposed of the total land area shall be under permanent green cover, in such a manner that, atleast plantation shall be taken up at least in 20% of the total green belt area and progressively achieve 100% in a span of five years and under no circumstances this land earmarked for green belt shall be used for any other purpose.
- 15. The civil construction shall be carried out with the fly ash bricks. If the fly ash bricks are not available locally the civil construction may carried out with other bricks with prior intimation to the concerned Regional Office of SPC Board. A statement indicating use of fly ash bricks during construction period shall be submitted to the Board quarterly for record.
- 16. The proponent should shall full-fledged environmental management cell and the head of environmental management cell shall report directly to the unit Chief Administrator (say M.D.). A detailed proposal to this effect is to be submitted.
- 17. The land on which the unit is proposed to be established shall be converted to industrial use Kisam by the competent authority. The copy of said land conversion document shall be submitted to the Board along with Consent to Operate application.
- 18. The Board may impose further conditions or modify the conditions stipulated in this order during installation and /or at the time of obtaining Consent to Operate and may revoke this clearance in case the stipulated conditions are not implemented and /or any information suppressed in the application form.
- 19. The industry shall apply for grant of Consent to Operate under section 25/26 of Water (Prevention & Control of Pollution) Act, 1974 & under section 21 of Air (Prevention & Control of Pollution) Act, 1981 at least 3 (three) months before the commercial production and obtain Consent to Operate from this Board. No production activity shall commence prior to installation of all pollution control measures.
- 20. The unit shall abide by E (P) Act, 1986 and Rules framed thereunder.
- 21. Depending on the environmental condition, stricter standards may be imposed for the effluent or restriction for discharge may be made for which adequate facilities from the beginning shall be made to meet such situation in future

B. WATER POLLUTION:

- 22. The unit shall install online Continuous Effluent Quality Monitoring System (CEQMS) at the outlet of Effluent Treatment Plant (ETP) for online real time data transmission through GPRS system to SPCB RTDAS server and also upload data for use by CPCB.
- 23. The domestic wastewater generated from the industry shall be treated in sewage treatment plant to meet the following standards as notified by the MoEF&CC, Govt. of India vide G.S.R. 1265 (E), dated 13.10.2017. The treated water shall be reused for gardening and plantation. Under no circumstances there shall be any discharge of treated waste water to outside the factory premises.

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SI. No.	Parameters	Standards 6.5-9.0	
1.	pH		
2.	BOD(mg/l)	30	
3.	TSS(mg/l)	<100	
4.	Fecal Coliform (MPN/100ml)	< 1000	

- 24. Use of treated as well as recycled water and rain water harvesting shall be widely adopted for conservation of water.
- 25. Process effluent / any wastewater shall not be allowed to mix with storm water. The proponent shall provide separate drain for storm water and process water.
- 26. The waste water generated in DM plant and Ammonia Plant during normal operation shall be treated in the In-plant Treatment Systems so that the same is recycled / neutralized in the plant and treated effluent shall be utilized for green belt and floor washings.
- 27. The proponent shall provide garland drains around coal storage area and all the stock pile area, followed by series of settling tanks to retain the solids, if any, in order to prevent damage to the surrounding land and water bodies.
- 28. The proponent shall construct, a full-fledged ETP of capacity 900 KLD for treatment of waste water generated from plant and treated water shall be completely reused. The proponent shall adopt Zero Liquid Discharge (ZLD) concept and under no circumstances the waste water shall be discharged to outside the factory premises.
- 29. The treated effluent shall be recycled and reused in the industry and/or used for water spraying or green belt development etc. The excess waste water shall be collected in Central Effluent Treatment Plant (CETP).
- 30. The treated waste water from the CETP shall be utilized after meeting the following standard.

Parameters	Limiting concentration in mg/l except for pH		
pH	5.5 to 9.0		
Suspended solids	100		
BOD, 3days, 27°C	30		
COD	250		
Oil & Grease	10		
Ammonical Nitrogen as N	50		
Cyanide as CN	0.2		
Phenolic compound	1.0		
Copper (Total)	3.0		
Iron (Total)	3.0		
Free available Chlorine	0.5		
Zinc	5.0		
Chromium (Total)	0.2		
Phosphate	5.0		

31. Storm water shall not be allowed to mix with effluent, scrubber water and / or floor washing and shall be channelized through separate drains as per natural gradient, passing through High Density Polyethylene (HDPE) lined pits, each having holding capacity of 10 minutes (hourly average) of rainfall.

32. Rain water harvesting structure shall be developed inside the plant premises and maximum effort shall be made to reuse harvested rain water, with a definite plan and programme to reduce the drawl of fresh water from water bodies.

C. AIR POLLUTION:

- 33. Necessary preventive measures shall be taken during construction phase so that the ambient air quality including noise shall conform to National ambient air quality standards and standards for noise in industrial area as per **Annexure-I**. Ambient air quality at the boundary of the plant premises shall meet the prescribed standards of the Board as per **Annexure - II**. The ambient air quality monitoring report shall be submitted to the Board every month.
- 34. The unit shall install online Continuous Stack Emission Monitoring Systems (CSEMS) at all the stacks of the plant for online real time monitoring for PM, SO₂ and Flouride and data transmission through GPRS system to SPCB RTDAS server and also upload data for use by CPCB.
- 35. The unit shall install online Continuous Ambient Air Quality Monitoring Systems (CAAQMS) within and outside the plant premises atleast at four locations for online real time monitoring and data transmission through GPRS system to SPCB RTDAS server and also upload data for use by CPCB.
- 36. Ambient Air Quality shall be maintained as per National Ambient Air Quality standard prescribed for industrial and mixed used area under E(P) Act, 1986.
- 37. Air compressor and DG set shall be acoustically designed and shall be housed in appropriate acoustic enclosures so that the noise level outside it shall conform to the prescribed norms.
- 38. The height of the stack attached to the D.G sets shall confirm to the following:
 - H = h + 0.2√KVA (Where, h = Height of the building where it is installed in meter KVA = Capacity of D.G Set and H = Height of the stack in meter above ground level)
- 39. The proponent shall install inbuilt system for removal of H₂S and Carbonyl Sulphide & Sulphur shall be recovered in the form of elemental Sulphur.
- 40. Wet limestone shall be used for flue gas desulphurization for 95% control of SO₂. Low NOx burners and selective catalyst reduction (SCR) shall be provided for high efficiency NOx control. Electrostatic Precipitator shall be installed for control of Particulate Matters.
- 41. Raw materials and products shall be stored in covered sheds and adequate dust suppression measures shall be taken to control fugitive emission from handling of raw materials and products.
- 42. Working area including the roads surrounding the plant shall be asphalted or concreted & water sprinkling system shall be installed to suppress the fugitive dust emission.
- 43. Both dust suppression (dry fog) and extraction (bag filter) system shall be provided at all dust generating source such as crushing, screening & material transfer points etc. to control fugitive emission.

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- 44. The unit shall provide adequate, both dust suppression (dry fog) and extraction (bag filter) system at all potential dust generating sources including Coal Handling Plant so that particulate matter emission shall not exceed 100 mg/Nm³. Stack height for de-dusting unit shall be calculated as per the formula H = 74Q ^{0.27}, where H and Q are stack height in meter and Particulate Matter (PM) emission in ton/hr respectively.
- 45. The proponent shall install Pneumatic dust handling system in all Bag Filter hoppers with common silo and telescopic chute arrangement. Mechanical operated system for timely collection and removal of the flue dust generated in air pollution control device shall be installed.
- 46. Air pollution control devices shall be maintained properly. Fabric bags and cages in bag house shall be checked regularly and replaced whenever required. Adequate availability of spares shall be ensured for immediate replacement.
- 47. All Pollution control equipment may be provided with separate electricity meter and totalizer for continuous recording of power consumption. The amperage of the ID fan may also be recorded continuously. Non-functioning of Pollution control equipment should be recorded in the same logbook along with reasons for not running the Pollution Control Equipment
- 48. The unit shall provide porthole and platform at suitable location with safe approach to conduct emission and monitoring at all the stacks.

D. SOLID AND HAZARDOUS WASTE:

- 49. The industry shall develop hazardous waste disposal site as per guideline of Central Pollution Control Board. Delhi for disposal of Hazardous Waste.
- 50. Sludge from raw Water Treatment Plant (WTP) shall be dewatered (centrifuged) with Decanter and the solid cake shall be used as manure after proper conditioning. Sludge from ETP shall be dewatered through suitable processes (decanter / Pressure Belt Filter). Solid cake of ETP shall be used either as manure or disposed off along with bottom ash.
- 51. Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc., Flame arresters shall be provided on tank farm, and solvent transfer shall be one through pumps.
- 52. All the Hazardous Wastes generated from the unit shall be stored under covered shed on concrete platforms and drain arrangement for collection of spillage in any before going for final disposal to the Hazardous Waste disposal site/ through CPCB/SPCB authorised vendors.
- 53. Coal tar generated if any from Coal Gasification plant shall be stored in an impervious pit and disposed off through authorized operators.
- 54. The proponent shall establish Mechanized Waste Convertor having polycrack method and other similar method for processing of Municipal Solid Waste generated from the unit, under covered shed to produce valuable products like oil, water, gas. carbon, metal, glass etc.

- 55. The other solid waste generated from the unit shall be suitably disposed off without causing any public nuisance or environmental contamination.
- 56. A Solid Waste Management Cell shall be created under Environmental Management Cell and complete utilization of all solid waste shall be envisaged and implemented in a sustained manner. All the available research and development options shall be scouted in this regard. The exact utilization of solid waste shall be finalized in consultation with the State Pollution Control Board.
- 57. The industry shall obtain authorization for management of Hazardous Waste as per previsions of Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 as amended from time to time.
- 58. Municipal Solid Waste generated from the unit shall be disposed off as per the Solid Waste Management Rules, 2016 and amendment thereafter.

Encl: Approved plant layout map and Annexures

MEMBER SECRETARY

Tο

The CEO,
M/s Talcher Fertilizers Limited (TFL),
2nd floor PARC Building,
GAIL Training Institute,
Noida Sector 16A, District - Gautam Budha Nagar,
Tehsil: Noida.

Memo No. 12952 /Date 30.11.2019 /

Copy forwarded to:

- 1. The Collector & District Magistrate, Angul.
- 2. The District Industries Centre, Angul.
- 3. The Director, Factories & Boiler, Bhubaneswar.
- 4. The Regional Officer, SPC Board, Angul.
- 5. Consent to Operate Section, SPC Board, BBSR.
- 6. The DFO, Angul.
- 7. Hazardous Waste Management Section SPC Board, BBSR.

8. Copy to Guard file.

CHIEF ENV. ENGINEER

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टिप्पण :

ाटप्पण : 1.जब कथी और अहां भी किसी अपने-अपने प्रवर्ग के लिये दो क्रिमिक प्रवोधन दिनों पर मापित मूल्य, ऊपर विनिर्दिष्ट सीमा से अधिक हो तो इसे नियमित या निरंतर प्रबोधन तथा अतिरिक्त अन्वेषण करवाने के लिये पर्याप्त कारण समझा जायेगा ।"।

[फा. सं. क्यू-15017/43/2007-सी.पी.डब्स्यू.] रजनीश दुवे, संयुक्त सचिव

टिप्पण : मूल नियम भारत के राजपत्र में असंत्यारण सं.का.आं.844 (अ), तारीख 19 नक्ष्यर 1986 द्वारा प्रकशित किये गये थे और पश्चातवर्ती संशोधन सं.का आ.433 (अ), तारीख 18 उधैल 1987, सा.का.नि. 176 (अ), तारीख 2 उद्योत 1998 और हाल में ही सा.का.नि. 97 (अ), तारीख 18 करवरी 2009: सा.का.नि. 149 (अ), तारीख 4 मार्च, 2009: सा.का.नि. 512 (अ), तारीख 9 जुलाई, 2009. सा.का नि. 543 (अ), तारीख 22 जुलाई, 2009; सा.का.नि. 595 (अ), तारीख 21 अगस्त, 2009: और सा.का.नि. 974 (अ) तारीख 04 नवमार 2009 द्वारा प्रकाशित किए गए ।

MINISTRY OF ENVIRONMENT AND FORESTS

NOTIFICATION

New Delhi, the 16th November, 2009

- G.S.R. 826(E).— In exercise of the powers conferred by section 6 and section 25 of the Environment (Protection) Act. 1986 (29 of 1986), the Central Government hereby makes the following rules further to amend the Environment (Protection) Rules, 1986, namely:—
- 1. (1) These rules may be called the Environment (Protection) Seventh Amendment Rules, 2009.
 - (2) They shall come into force on the date of their publication in the Official Gazette.
- 2. In the Environment (Protection) Rules, 1986 (hereinafter referred to as the said rules), in rule 3, in sub-rule (3B), for the words, brackets, figures and letters, "in columns (3) to (5) of Schedule VII", the words, brackets, figures and letters "in columns (4) and (5) of Schedule VII" shall be substituted.
- 3. For Schedule VII to the said rules and entries relating thereto, the following Schedule and entries shall be substituted, namely:—

"[SCHEDULE VII] [See rule 3(3B)] NATIONAL AMBIENT AIR QUALITY STANDARDS

S. No.	Polletani	Pollutumi Time Weighted Average	Concentration in Ambient Air		
			ludustrial, Residential, Hural and Other Aven	Ecologically Sensitive Area (notified by Central Government)	Methods of Measuremen
(1)	(2)	(3)	(4)	(5)	(6)
1	Sulphur Dioxide (SO ₂), µg/m ³	Annual *	5()	30	· Improved West and
		24 hours**	80	80	-(!traviolet fluorecaus
2	Nitrogen Dioxide	Annual*	41)	30	- Modified Jacob & Hughhelser (Na-
		24 hours**	63	80	Arsenite) - Chemiluminescence
3	Particulate Matter (size less than	Annual*	60	60	- TOEM
- 1	10µm) or PM ₁₀ µa/m²	24 hours**	100	100	- Beta attenuation
4	Particulate Matter (size less than	Annual*	+0	40	- Gravimetric
	2.5µm) or PM ₂ ,	24 hours**	60	60	- Reta - Revalie

(1)	(2)	(3)	(4)	(5)	(6)
S	Ozone (O ₁) μg/m ³	1 hours**	100	100	- UV photometric
	April 1	I hour""	180	180	- Chemical Method
6	Lend (Pb) µg/m	Annual*	0.50	0.50	- AAS /ICP method after sampling on EPM 2000
		24 hours**	1 ()	10	or equivalent filter paper - ED-XRF using Teffon
7	Carbon Monoxide(CO)	8 hours**	02	02	- Non Dispersive Infra Red (NDIR)
	mg/m²	1 hour**	(H	04	spectroscopy
8	Ammonia(NH ₁)	Annual*	100	100	-Chaniluminascence
	<u>μα/ш</u>)	24 hours**	400	400	-Indophenol blue maked
5	Benzme (Collo) µg/m²	Annual*	05	05	Gas chromatography based continuous analyzer Adsorption and Description followed by GC analysis
16	Benzo(o)Pyrene (BaP) - particulate phase only, ng/m	Annual®	01	01	- Solvent extraction followed by HPLC/GC analysis
11	Arsenic (As), ng/m ¹	Annual*	(Xu	Ob	AAS /ICP method after sampling on EPM 2000 or equivalent filter paper
12	Nickel (Ni), ng/m1	Annual*	20	20	- AAS /ICP method after sampling on EPM 2000 or equivalent filter paper
				5	

- Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.
- 49 24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be compiled with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

Note.— Whenever and wherever monitoring results on two consecutive days of monitoring exceed the limits specified above for the respective category, it shall be considered adequate reason to institute regular or continuous monitoring and further investigation.".

[F. No. Q-15017/43/2007-CPW]
RAJNEESH DUBE, Jt. Secy.

Note.— The principal rules were published in the Gazette of India, Extraordinary vide number S.O.844(E), dated the 19th November, 1986; and subsequently amended vide numbers S.O. 433(E), dated the 18th April, 1987; G.S.R. 176 (E), dated the 2th April 1996; and were recently amended vide numbers G.S.R. 97(E), dated the 18th February, 2009; G.S.R. 149(E), dated the 4th March, 2009; G.S.R. 512(E), dated the 9th July, 2009; G.S.R. 543(E), dated the 22th July, 2009; G.S.R. 595(E), dated the 21th August, 2009; and G.S.R. 794(E), dated the 4th November, 2009.

The Environment (Protection) Rules, 1986

ISCHEDULE IIII

(See rule 3)

AMBIENT AIR QUALITY STANDARDS IN RESPECT OF NOISE

Area Code	Category of Area	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	

Note

- 1. Day time is reckoned in between 6 a.m. and 9 p.m.
- 2. Night time is reckoned in between 9 p.m. and 6 a.m.
- 3. Silence zone is defined as areas upto 100 meters around such premises as hospitals, educational institutions and courts. The Silence Zones are to be declared by the Competent Authority.

Use of vehicular horns, loudspeakers and bursting of crackers shall be banned in these zones.

4. Mixed categories of areas should be declared as one of the four above mentioned categories by the Competent Authority and the corresponding standards shall apply.

Schedule III inserted vide GSR 1063(E), dt. 26-12.89, published in the Gazette No. 643, dt. 26.12.89.

Baseline Monitoring Report Results (May 2022 - October 2022)

1.0 Air Quality Monitoring Report (May 2022 - October 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/m³
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), µg/m3	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)	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 (May 2022 – October 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					

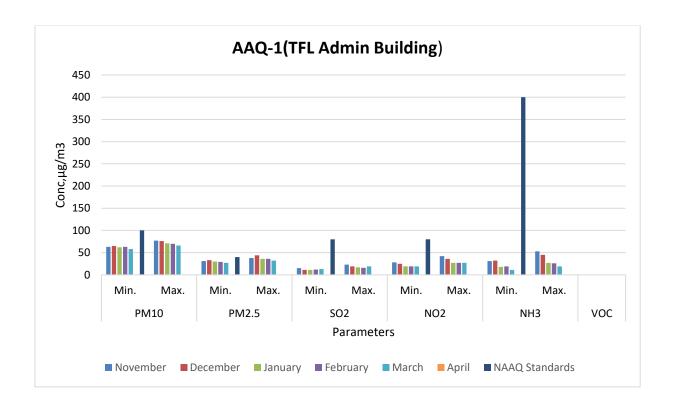
Table 3: Details of Air Quality Monitoring Locations (November 2021 to April 2022)

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 11/11/2	TI.D.Colony	85°10'20.4"E
3	TFL/A3	Karnapur Village	20°54'26.4"N
	11 E/113	Karnapur vinage	85°07'06.1"E
4	TFL/A4	TFL Guest House	20°54'14.8"N
	11 L/11 4	II L Guest House	85°09'56.9"E
5	TFL/A5	Balanda Village	20°55'31.0"N
	11 L/113	Dalanda vinage	85°09'26.8"E
6	TFL/A6	Kukudanga Village	20°53'23.3"N
	11 L/110	Trukudanga vinage	85°08'50.8"E

Ambient Air Quality Monitoring Results

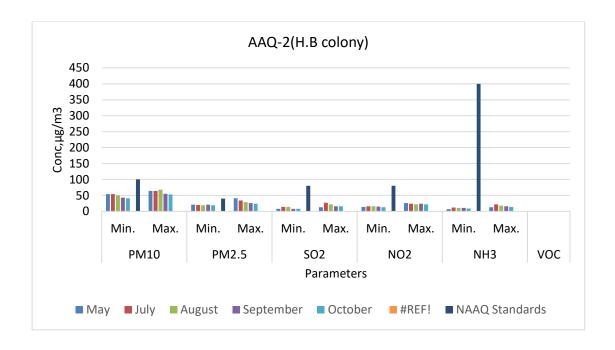
AAQ 1 - TFL Admin Building

Months	PM	I 10	PM2.5		SO	SO2		O2	NI	H3	VOC
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
May	55	69	22	39	9	15	18	27	8	14	0
July	51	63	22	41	17	24	17	24	15	22	0
August	56	69	26	34	13	22	16	27	13	22	0
September	47	57	23	28	9	15	16	22	11	18	0
October	46	57	22	28	10	16	16	22	11	17	0
NAAQ	10	00	4	0	8	0	8	0	40	00	
Standards											



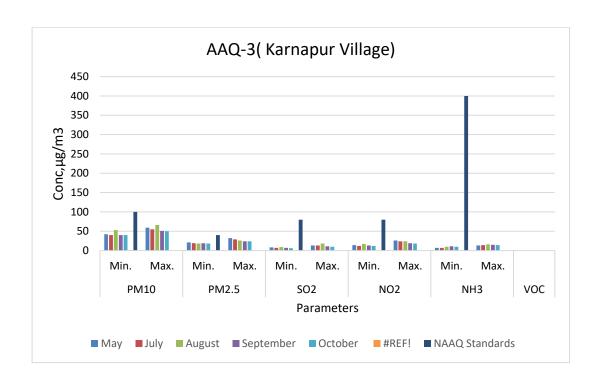
AAQ 2 - H.B. Colony

Months	PM	110	PM2.5		SO2		N	02	NI	Н3	VOC
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
May	54	64	21	41	8	13	14	26	7	13	0
July	54	64	20	34	14	27	16	24	12	22	0
August	50	68	19	29	14	22	16	22	11	18	0
September	43	55	21	26	8	16	15	24	11	16	0
October	41	53	19	24	8	16	13	22	9	14	0
NAAQ	10	00	4	0	8	0	8	0	4(00	
Standards											



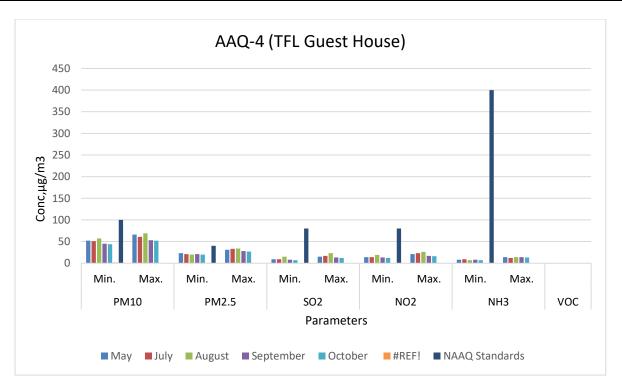
AAQ 3- Village Karnapur

Months	PM	110	PM2.5		SO2		N	02	NI	Н3	VOC
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
May	42	59	21	32	8	13	14	26	7	13	0
July	40	55	19	29	7	13	12	24	7	14	0
August	53	66	18	26	9	18	17	24	10	16	0
September	40	51	19	24	7	11	13	19	11	15	0
October	40	50	18	24	6	10	12	18	10	14	0
NAAQ	10	00	4	0	8	0	8	0	4(00	
Standards											



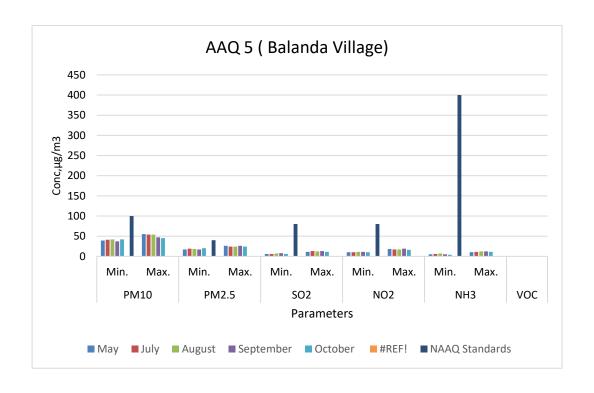
AAQ 4 - TFL Guest House

Months	PM	I 10	PM2.5		SO	SO2		O2	NI	H3	VOC
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
May	52	66	23	31	9	15	14	21	8	14	0
July	51	61	21	33	9	17	14	23	9	12	0
August	57	69	20	34	15	23	19	26	7	14	0
September	45	53	21	28	8	13	13	17	8	14	0
October	44	52	20	27	7	12	12	16	7	13	0
NAAQ	10	00	4	0	8	0	8	0	4(00	
Standards											



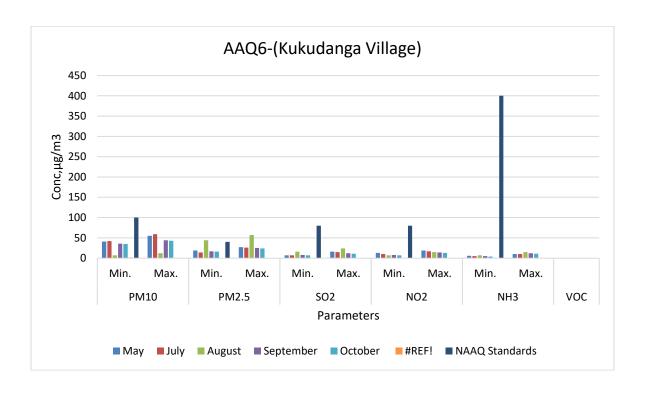
AAQ 5 - Balanda village

Months	PM	I 10	PM2.5		SO2		N) 2	NI	H3	VOC
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
May	39	55	17	26	6	11	10	18	5	10	0
July	41	54	19	24	6	13	10	17	6	11	0
August	42	54	18	24	7	12	11	17	7	12	0
September	37	47	17	26	8	13	11	19	5	12	0
October	42	45	20	24	6	11	10	16	4	11	0
NAAQ	10	00	4	0	8	0	8	0	4(00	
Standards											



AAQ 6 - Kukudanga village

Months	PM	I 10	PM2.5		SO	SO2)2	NI	Н3	VOC
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
May	41	55	19	27	7	16	13	19	6	10	0
July	42	59	14	26	7	15	10	17	5	10	0
August	7	12	44	57	16	24	7	15	7	15	0
September	36	44	17	25	8	12	8	14	5	12	0
October	35	43	16	24	7	11	7	13	4	11	0
NAAQ	10	00	4	0	8	0	8	0	4(00	
Standards											



AAQ Observations:

PM₁₀: The maximum and minimum concentrations for PM₁₀ were recorded as $66\mu g/m^3$ at TFL Admin Building and 7 $\mu g/m^3$ at Kukudanga village.

PM_{2.5}: The maximum and minimum concentrations for PM_{2.5} were recorded as 57 μ g/m³ at Kukudanga village and 14 μ g/m³ at Kukudanga village.

SO₂: The maximum and minimum concentrations for SO₂ were recorded as $27.0 \, / \text{m}^3$ at H.B.Colony and $6.0 \, \mu \text{g/m}^3$ at Karnapur village.

NO₂: The maximum and minimum concentrations for NO₂ were recorded as $27.0 \mu g/m^3$ at TFL Admin Building and $7.0 \mu g/m^3$ at Kukudanga village.

NH₃: The maximum and minimum concentrations for NH₃ were recorded as 22.0 μ g/m³ at Balanda Building & Kukudanga village and 4.0 μ g/m³ at TFL Admin Building & H. B. Colony.

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 industrial, Rural, Residential and other area.

Noise Level Monitoring Results

N1 – TFL Admin Building

Date of Sampling	Lmax dB(A)	Lmin dB(A)	L day dB(A)	L Night dB(A)	Leq dB(A)
May	73.2	49.9	51.6 – 65.6	50.8 – 59.0	51.3 – 64.0
July	74.4	56.9	51.3 – 64.3	49.3 – 55.6	52.6 – 62.8
August	74.2	49.2	55.4 – 64.2	51.2 - 54.3	59.6 – 61.9
September	67.2	44.4	53.1 – 58.3	45.4 – 48.9	51.9 – 56.7
October	66.2	42.1	52.2 - 57.2	43.6 - 47.8	50.7 - 52.8

Observation:

The Noise level monitoring samplings in the TFL Admin Building are taken for 8 days for each month (May '22 to October '22). The above table shows the minimum to maximum range of sample results. Comparing to all the months, July month shows the highest level of 74.4 dB(A) for Lmax, October month shows the minimum level of 42.1dB(A) for L min, and the minimum to maximum range of L day, L night and Leq are shown in the above table.

N2 - H.B.Colony

Date of	Lmax	Lmin	L day	L Night	Leq
Sampling	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
May	53.6	32.1	48.2 - 54.2	38.6 - 44.1	47.2 - 52.5
July	51.2	33.2	43.2 - 51.2	37.6 - 43.1	43.2 - 49.5
August	72.3	43.1	53.8 - 63.2	41.6 - 46.6	52.2 - 60.0
September	73.2	42.9	53.4 – 58.4	45.8 - 47.1	53.1 - 56.8
October	72.3	41.8	52.3 - 57.3	39.5 - 47.2	51.8 - 55.7

Observation:

The Noise level monitoring samplings in the H.B.Colony are taken for 8 days for each month (May '22 to October '22). The above table shows the minimum to maximum range of sample results. Comparing to all the months, September month shows the highest level of 73.2 dB (A) for Lmax, May month shoes the minimum level of 32.1 dB(A) for L min, and the minimum to maximum range of L day, L night and Leq are shown in the above table.

Date of Lmax L day L Night Lmin Leq Sampling dB(A) dB(A) dB(A) dB(A) dB(A) 39.9 - 51.637.5 - 44.542.0 - 49.9May 52.6 36.1 37.9 - 47.635.5 - 47.237.3 - 46.0July 51.6 37.8 August 73.5 42.0 53.6 - 65.242.5 - 49.655.0 - 61.051.2 32.6 49.7 - 54.141.4 - 46.248.6 - 52.5September October 58.5 31.5 48.6 - 53.340.3 - 45.147.5 - 51.7

N3 – Karnapur Village

Observation:

The Noise level monitoring samplings in the Karnapur Village are taken for 8 days for each month (May '22 to October '22). The above table shows the minimum to maximum range of sample results. Comparing to all the months, August month shows the highest level of 73.5 dB(A) for Lmax, October month shoes the minimum level of 31.5 dB(A) for L min, and the minimum to maximum range of L day, L night and Leq are shown in the above table.

Date of L Night Lmax Lmin L day Leq Sampling dB(A) dB(A) dB(A) dB(A) dB(A) 72.3 52.1 51.2 - 57.636.8 - 48.750.1 - 55.9May 48.1 46.2 - 51.936.7 - 43.644.7 - 50.4July 66.1 51.3 - 60.7August 73.0 63.3 53.6 - 65.340.9 - 50.251.2 - 55.645.2 - 47.950.1 - 54.1September 59.6 41.1 49.0 - 53.0October 58.5 40.2 50.1 - 54.544.3 - 46.8

N4 – TFL Guest House

Observation:

The Noise level monitoring samplings in the TFL Guest House are taken for 8 days for each month (May '22 to October '22). The above table shows the minimum to maximum range of sample results. Comparing to all the months, August month shows the highest level of 73.0 dB(A) for Lmax, October month shoes the minimum level of 40.2 dB(A) for L min, and the minimum to maximum range of L day, L night and Leq are shown in the above table.

Date of Lmax L day L Night Lmin Leq Sampling dB(A) dB(A) dB(A) dB(A) dB(A) 53.6 39.4 50.6 - 54.633.5 - 45.649.0 - 52.9May 49.1 - 53.333.4 - 43.147.8 - 51.7July 52.3 41.6 August 48.5 - 55.367.3 42.6 52.2 - 56.342.1 - 47.753.4 34.1 49.4 - 54.941.1 - 44.448.1 - 53.3September October 57.2 33.2 48.3 - 53.740.2 - 43.347.0 - 52.1

N5 – Balanda Village

Observation:

The Noise level monitoring samplings in the Balanda Village are taken for 8 days for each month (May '22 to October '22). The above table shows the minimum to maximum range of sample results. Comparing to all the months, August month shows the highest level of 67.3 dB(A) for Lmax, October month shoes the minimum level of 33.2 dB(A) for L min, and the minimum to maximum range of L day, L night and Leq are shown in the above table.

Date of Sampling	Lmax dB(A)	Lmin dB(A)	L day dB(A)	L Night dB(A)	Leq dB(A)
May	66.2	41.6	50.2 - 56.3	41.7 - 46.5	49.3 - 54.8
July	63.4	41.6	49.2 - 53.3	39.6 – 45.5	48.2 - 51.9
August	73.2	43.8	50.2 - 59.4	42.8 - 47.5	49.0 - 60.0
September	56.6	33.3	49.9 – 53.2	41.3 – 44.8	48.7 - 51.7
October	56.6	32.2	48.8 - 53.2	40.2 - 43.7	48.8 - 51.7

N6 – Kukudanga Village

Observation:

The Noise level monitoring samplings in the Kukudanga Village are taken for 8 days for each month (May '22 to October '22). The above table shows the minimum to maximum range of sample results. Comparing to all the months, August month shows the highest level of 73.2 dB (A) for Lmax, October month shoes the minimum level of 32.2 dB(A) for L min, 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 each month (May '22 to October '22) are all within the standard limits and it is enclosed as **Annexure - III**

31x Monthly Compliance Report of Tatcher Pertinizers Elimited, Tatcher, Oursia.

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 23.05.2022, 26.07.2022, 28.08.2022, 19.09.2022, 21.10.2022 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 23.05.2022, 26.07.2022, 28.08.2022, 19.09.2022, 21.10.2022 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/2022/10/A1
Sample Drawn by	;	ABC Techno Labs India Private Limited
Sample Description	:	Ambient Air Quality Monitoring
Location Sampling	:	AAQ 1 - TFL Admin Building
Date of Sampling	:	01-10-2022 to 27-10-2022
Sampling method	:	IS 5182 Part 5 & 14
Report Date	:	10-11-2022

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	Page 1 of 2 Volatile Organic Compounds (VOC) µg/m³
Test Methods	IS 5182 : Part-23	40 CFR Appendix L	IS 5182 : Part 2	IS 5182 : Part 6	ABCTL/SOP /A/05	ABCTL/SOP/ A/13
Date of Sampling		(Part 50)	1.1	16	14	BDL(<1.0)
01.10.2022	52	24	11			
03.10.2022	46	22	16	18	16	BDL(<1.0)
07.10.2022	54	27	12	22	15	BDL(<1.0)
11.10.2022	56	26	14	17	11	BDL(<1.0)
14.10.2022	55	28	10	16	17	BDL(<1.0)
17.10.2022	51	23	13	21	15	BDL(<1.0)
21.10.2022	56	27	11	17	12	BDL(<1.0)
27.10.2022	57	25	13	20	17	BDL(<1.0)
Max	57	28	16	22	17	0
Min	46	22	10	16	11	0
Mean	53	25.2	12.6	18.5	14.5	0
NAAQ Standards	100	60	80	80	400	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

600 098 Quality Manager Verified by



A. Robson Chinnadurai Technical Manager-Lab

Authorised Signatory

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TEST REPORT

ISSUED TO:

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/2022/10/A1	
Sample Drawn by	:	ABC Techno Labs India Private Limited	
Sample Description	:	Ambient Air Quality Monitoring	
Location Sampling	:	AAQ 1 - TFL Admin Building	
Date of Sampling	:	01-10-2022 to 27-10-2022	
Sampling method	:	IS 5182 Part 5 & 14	
Report Date	:	10-11-2022	Page 2 of 2

Test Parameters	Methane HC μg/m³	Non Methane HC μg/m ³
Test Methods	IS 5182 : 1	Part 11
Date of Sampling		
01.10.2022	BDL(<0.1)	BDL(<0.1)
03.10.2022	BDL(<0.1)	BDL(<0.1)
07.10.2022	BDL(<0.1)	BDL(<0.1)
11.10.2022	BDL(<0.1)	BDL(<0.1)
14.10.2022	BDL(<0.1)	BDL(<0.1)
17.10.2022	BDL(<0.1)	BDL(<0.1)
21.10.2022	BDL(<1.0)	BDL(<1.0)
27.10.2022	BDL(<1.0)	BDL(<1.0)
Max	0	0
Min	0	0
Mean	0	0
AQ Standards	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. Hollin

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	:	BCTL/2022/10/A2			
Sample Drawn by	1	ABC Techno Labs India Private Limited			
Sample Description		Ambient Air Quality Monitoring			
Location Sampling	- 1	AAQ 2 - H.B.Colony			
Date of Sampling		01-10-2022 to 27-10-2022			
Sampling method	:	IS 5182 Part 5 & 14			
Report Date		10-11-2022			

Page 1 of 2

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
Test Methods	IS 5182 : Part-23	40 CFR Appendix L	IS 5182 : Part 2	IS 5182 : Part 6	ABCTL/SOP/A/05	ABCTL/SOP/A
Date of Sampling		(Part 50)				
01.10.2022	47	22	10	17	12	BDL(<1.0)
03.10.2022	49	23	9	16	13	BDL(<1.0)
07.10.2022	45	21	11	13	11	BDL(<1.0)
11.10.2022	46	20	8	21	14	BDL(<1.0)
14.10.2022	41	19	16	20	12	BDL(<1.0)
17.10.2022	53	24	12	22	11	BDL(<1.0)
21.10.2022	45	21	11	18	10	BDL(<1.0)
27.10.2022	52	24	13	14	9	BDL(<1.0)
Max	53	24	16	22	14	0
Min	41	19	8	13	9	0
Mean	47.2	21.7	11.4	17.6	11.5	0
NAAQ Standards	100	60	80	80	400	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.....

A. Robson Chinnadurai

Technical Manager-Lab

Authorised Signatory

S. Dharani Quality Manager

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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/2022/10/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	:	01-10-2022 to 27-10-2022	
Sampling method	:	IS 5182 Part 5 & 14	
Report Date	:	10-11-2022	

Page 2 of 2 Non Methane HC Methane HC **Test Parameters** $\mu g/m^3$ $\mu g/m^3$ Test Methods IS 5182: Part 11 Date of Sampling BDL(<0.1) 01.10.2022 BDL(<0.1) BDL(<0.1) 03.10.2022 BDL(<0.1) 07.10.2022 BDL(<0.1) BDL(<0.1)BDL(<0.1) 11.10.2022 BDL(<0.1) BDL(<0.1) 14.10.2022 BDL(<0.1) 17.10.2022 BDL(<0.1) BDL(<0.1)BDL(<1.0) BDL(<1.0) 21.10.2022 BDL(<1.0) 27.10.2022 BDL(<1.0) 0 Max 0 0 Min 0 Mean **NAAQ Standards** 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.....





A. Robson Chinnadurai Technical Manager-Lab

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S. Dharani

Quality Manager

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TEST REPORT

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Report Number	:	ABCTL/2022/10/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		01-10-2022 to 27-10-2022		
Sampling method	:	IS 5182 Part 5 & 14		
Report Date		10-11-2022		

Page 1 of 2

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
Test Methods	IS 5182 : Part-	40 CFR Appendix	IS 5182 : Part	IS 5182 : Part 6	ABCTL/SO	ABCTL/SOP/A/
Date of Sampling	23	L (Part 50)	2	15 5102 . Tart o	P/A/05	13
01.10.2022	42	21	7	14	12	BDL(<1.0)
03.10.2022	41	18	8	13	11	BDL(<1.0)
07.10.2022	40	21	6	16	14	BDL(<1.0)
11.10.2022	45	23	10	18	13	BDL(<1.0)
14.10.2022	47	20	7	12	12	BDL(<1.0)
17.10.2022	50	23	9	15	11	BDL(<1.0)
21.10.2022	43	22	7	16	12	BDL(<1.0)
27.10.2022	46	24	8	14	10	BDL(<1.0)
Max	50	24	10	18	14	0
Min	40	18	6	12	10	0
Mean	44.4	21.4	7.8	14.8	11.9	0
NAAQ Standards	100	60	80	80	400	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.....



A. Robson Chinnadurai Technical Manager-Lab

Authorised Signatory

S. Dharani Quality Manager

Verified by

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TEST REPORT

ISSUED TO:

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/2022/10/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	:	01-10-2022 to 27-10-2022	
Sampling method	:	IS 5182 Part 5 & 14	
Report Date	:	0-11-2022	

308		Page 2 of
Test Parameters	Methane HC μg/m³	Non Methane HC μg/m³
Test Methods	IS 5182 :	Part 11
Date of Sampling		
01.10.2022	BDL(<0.1)	BDL(<0.1)
03.10.2022	BDL(<0.1)	BDL(<0.1)
07.10.2022	BDL(<0.1)	BDL(<0.1)
11.10.2022	BDL(<0.1)	BDL(<0.1)
14.10.2022	BDL(<0.1)	BDL(<0.1)
17.10.2022	BDL(<0:1)	BDL(<0.1)
21.10.2022	BDL(<1.0)	BDL(<1.0)
27.10.2022	BDL(<1.0)	BDL(<1.0)
Max	0	0
Min	0	0
Mean	0	0
AAQ Standards	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.....

CHENNA 600 098 S. Dharani



A. Robson Chinnadurai Technical Manager-Lab

Authorised Signatory

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Quality Manager

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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/2022/10/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		01-10-2022 to 27-10-2022	
Sampling method	1	IS 5182 Part 5 & 14	
Report Date	:	10-11-2022	

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	Page 1 of 2 Volatile Organic Compounds (VOC) μg/m³
Test Methods	IS 5182 : Part-23	40 CFR Appendix L	IS 5182 : Part 2	IS 5182 : Part 6	ABCTL/SOP/A/05	ABCTL/SOP
Date of Sampling		(Part 50)	10 3 102 . 1 11 10	ABETE/301/A/03	/A/13	
01.10.2022	44	21	12	16	7	BDL(<1.0)
03.10.2022	50	26	8	13	10	BDL(<1.0)
07.10.2022	47	24	11	12	11	BDL(<1.0)
11.10.2022	48	23	10	15	8	BDL(<1.0)
14.10.2022	47	22	7	14	10	BDL(<1.0)
17.10.2022	52	27	12	16	9	BDL(<1.0)
21.10.2022	51	25	10	13	13	BDL(<1.0)
27.10.2022	44	20	8	14	12	BDL(<1.0)
Max	52	27	12	16	13	0
Min	44	20	7	12	7	0
Mean	47.9	23.5	9.7	14.1	10	0
NAAQ Standards	100	60	80	80	400	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 Verified by





A. Robson Chinnadurai Technical Manager-Lab

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TEST REPORT

ISSUED TO:

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/2022/10/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		01-10-2022 to 27-10-2022	
Sampling method	:	IS 5182 Part 5 & 14	
Report Date	:	10-11-2022	

Test Parameters	Methane HC	Non Methane HC	
	$\mu g/m^3$	μg/m³	
Test Methods	IS 5182 : Part 11		
Date of Sampling	13 5182 :	rart 11	
01.10.2022	BDL(<0.1)	BDL(<0.1)	
03.10.2022	BDL(<0.1)	BDL(<0.1)	
07.10.2022	BDL(<0.1)	BDL(<0.1)	
11.10.2022	BDL(<0.1)	BDL(<0.1)	
14.10.2022	BDL(<0.1)	BDL(<0.1)	
17.10.2022	BDL(<0.1)	BDL(<0.1)	
21.10.2022	BDL(<1.0)	BDL(<1.0)	
27.10.2022	BDL(<1.0)	BDL(<1.0)	
Max	0	0	
Min	0	0	
Mean	0	0	
AQ Standards	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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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/2022/10/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	:	01-10-2022 to 27-10-2022	
Sampling method		IS 5182 Part 5 & 14	
Report Date	:	10-11-2022	

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	Page 1 of 2 Volatile Organic Compounds (VOC) 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/SO P/A/05	ABCTL/SOP/A/13
01.10.2022	42	21	11	10	8	BDL(<1.0)
03.10.2022	44	22	6	11	11	BDL(<1.0)
07.10.2022	40	23	7	13	6	BDL(<1.0)
11.10.2022	45	24	10	12	7	BDL(<1.0)
14.10.2022	36	21	11	16	11	BDL(<1.0)
17.10.2022	35	19	7	14	9	BDL(<1.0)
21.10.2022	40	17	10	10	5.	BDL(<1.0)
27.10.2022	42	20	11	13	4	BDL(<1.0)
Max	45	24	11	16	11	0
Min	35	17	6	10	4	0
Mean	42	20	11	13	4	0
NAAQ Standards	100	60	80	80	400	Not Specified

BDL-Below Detection Limit

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



A. Robson Chinnadurai Technical Manager-Lab **Authorised Signatory**

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Report Number	1	ABCTL/2022/10/A5	
Sample Drawn by	:	ABC Techno Labs India Private Limited	
Sample Description	:	Ambient Air Quality Monitoring	
Location Sampling	:	AAQ 5 – Balanda Village	
Date of Sampling	5	01-10-2022 to 27-10-2022	
Sampling method		IS 5182 Part 5 & 14	
Report Date		10-11-2022	

		Page 2 of 2		
Test Parameters	Methane HC μg/m ³	Non Methane HC μg/m ³		
Test Methods	IS 5192.	Port 11		
Date of Sampling	IS 5182 : Part 11			
01.10.2022	BDL(<0.1)	BDL(<0.1)		
03.10.2022	BDL(<0.1)	BDL(<0.1)		
07.10.2022	BDL(<0.1)	BDL(<0.1)		
11.10.2022	BDL(<0.1)	BDL(<0.1)		
14.10.2022	BDL(<0.1)	BDL(<0.1)		
17.10.2022	BDL(<0.1)	BDL(<0.1)		
21.10.2022	BDL(<1.0)	BDL(<1.0)		
27.10.2022	BDL(<1.0)	BDL(<1.0)		
Max	0	0		
Min	0	0		
Mean	0	0		
AAQ Standards	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

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Report Number	:	ABCTL/2022/10/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		01-10-2022 to 27-10-2022
Sampling method	:	IS 5182 Part 5 & 14
Report Date	:	10-11-2022

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 (NO2), μg/m³	Ammonia (NH ₃), μg/m ³	Page 1 of 2 Volatile Organic Compounds (VOC) 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/SO P/A/05	ABCTL/SOP/A /13
01.10.2022	40	21	11	11	10	BDL(<1.0)
03.10.2022	41	24	7	8	11	BDL(<1.0)
07.10.2022	38	22	11	10	7	BDL(<1.0)
11.10.2022	41	16	8	8	8	BDL(<1.0)
14.10.2022	35	17	10	7	6	BDL(<1.0)
17.10.2022	43	20	8	11	5	BDL(<1.0)
21.10.2022	38	18	7	12	4	BDL(<1.0)
27.10.2022	36	22	9	13	9	BDL(<1.0)
Max	43	24	11	13	11	0
Min	35	16	7	7	4	0
Mean	39	20	8.9	10	7.5	0
NAAQ Standards	100	60	80	80	400	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. Jotulani S. Dharani

Quality Manager Verified by





A. Robson Chinnadurai Technical Manager-Lab

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TEST REPORT

ISSUED TO:

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/2022/10/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		01-10-2022 to 27-10-2022	
Sampling method	:	IS 5182 Part 5 & 14	
Report Date	:	10-11-2022	

		Page 2 of		
Test Parameters	Methane HC μg/m³	Non Methane HC μg/m³		
Test Methods	IS 5182 :	Part 11		
Date of Sampling	13 3102 . Falt 11			
01.10.2022	BDL(<0.1)	BDL(<0.1)		
03.10.2022	BDL(<0.1)	BDL(<0.1)		
07.10.2022	BDL(<0.1)	BDL(<0.1)		
11.10.2022	BDL(<0.1)	BDL(<0.1)		
14.10.2022	BDL(<0.1)	BDL(<0.1)		
17.10.2022	BDL(<0.1)	BDL(<0.1)		
21.10.2022	BDL(<1.0)	BDL(<1.0)		
27.10.2022	BDL(<1.0)	BDL(<1.0)		
Max	0	0		
Min	0	0		
Mean	0	0		
AQ Standards	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.....

CHENNAI 600 098



A. Robson Chinnadurai Technical Manager-Lab

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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/2022/10/N1	
Sample Drawn by		ABC Techno Labs India Private Limited	
Sample Description	:	Noise Level Monitoring	
Location Sampling	:	N1 - TFL Admin Building	
Date of Sampling	:	01-10-2022 to 27-10-2022	
Report Date		10-11-2022	

Page 1 of 1

Date of Sampling	Lmax dB(A)	Lmin dB(A)	L day dB(A)	L Night dB(A)	Leq dB(A)
01.10.2022	65.5	43.3	52.7	44.3	51.2
03.10.2022	66.2	44.2	54.2	46.7	52.8
07.10.2022	64.8	45.3	53.2	47.8	52.0
11.10.2022	60.3	43.2	57.2	46.2	55.6
14.10.2022	61.8	45.4	55.4	45.8	53.9
17.10.2022	65.3	44.3	52.2	43.6	50.7
21.10.2022	61.5	42.1	52.3	46.2	51.0
27.10.2022	60.2	44.7	54.2	45.1	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.....



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/2022/10/N2
Sample Drawn by	:	ABC Techno Labs India Private Limited
Sample Description	:	Noise Level Monitoring
Location Sampling	:	N2 - H.B. Colony
Date of Sampling	:	01-10-2022 to 27-10-2022
Report Date	:	10-11-2022

Page 1 of 1

Date of Sampling	Lmax dB(A)	Lmin dB(A)	L day dB(A)	L Night dB(A)	Leq dB(A)
01.10.2022	63.6	43.4	56.4	45.7	54.8
03.10.2022	65.1	43	54.4	46	52.9
07.10.2022	64.1	42.7	57.3	45.5	55.7
11.10.2022	71.2	43.6	53.5	39.5	51.8
14.10.2022	72.1	43.1	56.4	47.2	54.9
17.10.2022	70.1	41.8	55.2	44.7	53.6
21.10.2022	69.2	43.2	52.3	45	50.9
27.10.2022	72.3	44.1	53.2	47.1	51.9

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- Four

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/2022/10/N3	
Sample Drawn by	:	ABC Techno Labs India Private Limited	
Sample Description	1	Noise Level Monitoring	
Location Sampling	1	N3- Karnapur village	
Date of Sampling	:	01-10-2022 to 27-10-2022	
Report Date	:	10-11-2022	D 4 64
			Page 1 of 1

Leq L day Lmin Lmax L Night dB(A) Date of Sampling dB(A) dB(A) dB(A) dB(A) 49.1 40.3 50.7 35.2 58.5 01.10.2022 47.5 43.6 48.6 34.2 50.1 03.10.2022 49.7 42.5 51.2 31.5 52.4 07.10.2022 51.7 41.8 53.3 33.6 54.4 11.10.2022 42.8 48.8 50.2 32.5 55.7 14.10.2022 50.0 41.1 40.2 51.6 56.4 17.10.2022 44.3 51.1 52.5 34.8 54.3 21.10.2022 47.9 45.1 48.8 41.2 50.4 27.10.2022

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



CHENNAL 600 098 S. Dharani

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.

Dan aut Numbau		ABCTL/2022/10/N4	
Report Number			
Sample Drawn by	:	ABC Techno Labs India Private Limited	
Sample Description		Noise Level Monitoring	
Location Sampling	:	N4 – TFL Guest House	
Date of Sampling	:	01-10-2022 to 27-10-2022	
Report Date	:	10-11-2022	

Page 1 of 1

Date of Sampling	Lmax dB(A)	Lmin dB(A)	L day dB(A)	L Night dB(A)	Leq dB(A)
01.10.2022	50.2	42.5	54.5	44.8	53.0
03.10.2022	51.2	40.5	52.5	45.4	51.1
07.10.2022	53.1	41.2	53.4	46.5	52.1
11.10.2022	55.1	40.2	54.5	46.1	53.0
14.10.2022	52.2	42.2	53.1	44.6	51.6
17.10.2022	56.1	43.1	51.4	46.8	50.3
21.10.2022	58.5	41.3	50.1	45.5	49.0
27.10.2022	54.1	42.2	51.3	44.3	50.0

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-John S. Dharani Quality Manager

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Report Number	:	ABCTL/2022/10/N5	
Sample Drawn by	:	ABC Techno Labs India Private Limited	
Sample Description	:	Noise Level Monitoring	
Location Sampling	:	N5 – Balanda Village	
Date of Sampling	:	01-10-2022 to 27-10-2022	
Report Date		10-11-2022	

Page 1 of 1 L day L Night Leg Lmin Lmax Date of Sampling dB(A) dB(A) dB(A)dB(A) dB(A)48.3 42.2 47.0 33.2 01.10.2022 55.8 50.2 03.10.2022 53.3 37.6 51.7 42.1 50.5 56.1 52.1 40.2 07.10.2022 38.1 53.7 41.3 52.1 34.2 11.10.2022 55.8 49.2 50.7 42.2 14.10.2022 52.3 40.2 38.6 51.4 41.4 49.9 17.10.2022 54.1 51.3 52.8 43.3 21.10.2022 57.2 41.0 42.8 50.8 52.3 42.1 27.10.2022 55.5

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	

.....END OF REPORT



S. Dharani

Quality Manager Verified by



A. Robson Chinnadurai Technical Manager-Lab

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ABC Techno Labs India Private Limited

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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.

PIN-7371		
Report Number Sample Drawn by Sample Description Location Sampling Date of Sampling Report Date	: ABCTL/2022/10/N6 : ABC Techno Labs India Private Limited : Noise Level Monitoring : N6 - Kukudanga village : 01-10-2022 to 27-10-2022 : 10-11-2022	Page 1 of 1 Leq

port Date		I v in	L day	L Night dB(A)	Leq dB(A)
Date of Sampling	Lmax dB(A)	Lmin dB(A)	dB(A) 53.2	43.2	51.7 49.2
01.10.2022	56.6 50.5	35.2	50.5 52.4	41.5	50.8 49.5
03.10.2022	53.2	32.2 34.8	51.1	40.2	47.6
11.10.2022 14.10.2022	53.1 52.2	36.1 37.3	48.8	42.6	48.8 50.5
17.10.2022 21.10.2022	51.3 52.1	33.2 35.8	52.1 51.3	42.1	49.8

022 53.2 35.6	Lday dB(A)	Lnight dB(A)
Ambient Noise Standards Zone Classification	75	70
Industrial Area	65 55	55 45
Commercial Area Residential Area	50	40
Silence ZoneEND O	F REPORT	



S. Dharani

Quality Manager



Robson Chinnadurai Technical Manager-Lab

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Sample Details:Page 1 of 2Report NumberABCTL/2022/10/GW1Sample Drawn ByLaboratory

poreriumou.	110010/2022/10/0111	ounpie branin by	Baboracory
Sample Description	Ground Water	Sampling Method	IS: 3025 - Part 1
Location Sampling	GW1 - Tentulei Village	Date of Receipt	24-10-2022
Sample Condition	Good	Analysis Commenced on	24-10-2022
Date of Sampling	21-10-2022	Report Date	10-11-2022

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	0.5	1
5	pH at 25 °C	IS 3025 (Part 11)-1983(RA:2017)	-	7.39	6.5-8.5
6	Total dissolved solids	IS 3025 (Part 16)-1984 (RA: 2017)	mg/l	314	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	27.3	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	102	200
11	Chloride as Cl-	IS 3025 (Part 32)-1988 (RA: 2019)	mg/l	83	250
12	Sulphate as SO4	APHA 23rd Edition -4500-SO42- E	mg/l	28	200
13	Nitrate as NO3	APHA 23rd Edition -4500- NO3- B	mg/l	5	45
14	Fluoride as F	APHA 23rd Edition -4500-F B&D	mg/l	0.17	1
15	Total Hardness as CaCO3	IS 3025 (Part 21)-2009(RA:2019)	mg/l	136	200
16	Calcium Hardness as Ca	IS 3025 (Part 40)-1991 (RA:2019)	mg/l	35	75
17	Magnesium Hardness as Mg	APHA 23rd Edition-3500 Mg B	mg/l	12	30

Contd.....





S. Dharani Quality Manager Verified by

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		A D.C. 12022 /40 /CIAI4
Report No		ABCTL/2022/10/GW1
Sample Description	:	GW1 - Tentulei Village
Date of Report	:	10-11-2022

					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	55	Not specified
19	Potassium as K	IS: 3025 Part 45-1993 (Reaff:2019)	mg/l	1.9	Not specified
20	Silica as SiO2	APHA 23rd Edition -4500-SiO2- D	mg/l	12.1	Not specified
21	Iron as Fe	IS 3025 (Part 53)-1987 (RA:2019)	mg/l	0.14	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)-2022	mg/l	BDL(< 0.01)	0.05
24	Lead as Pb	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	0.01
25	Zinc as Zn	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	5
26	Cadmium as Cd	IS 3025 (Part 65)-2022	mg/l	BDL(<0.003)	0.003
27	Copper as Cu	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	0.05
28	Nickel as Ni	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	0.02
29	Arsenic as As	IS 3025 (Part 65)-2022	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	ů.

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

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



S. Dharani
Quality Manager

Dr. M Krishna Moorthy Head - Microbiology

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.

Page 1 of 2 Sample Details.

Sample Details.				
ABCTL/2022/10/GW2	Sample Drawn By	Laboratory		
Ground Water	Sampling Method	IS: 3025 - Part 1		
GW2 - Balanda Village	Date of Receipt	24-10-2022		
Good	Analysis Commenced on	24-10-2022		
21-10-2022	Report Date	10-11-2022		
	Ground Water GW2 - Balanda Village Good	Ground Water Sampling Method GW2 - Balanda Village Date of Receipt Good Analysis Commenced on		

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	20	Agreeable	Agreeable
3	Taste	IS 3025 (Part 8)-1984(RA:2017)	7	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)	-	7.41	6.5-8.5
6	Total dissolved solids	IS 3025 (Part 16)-1984 (RA: 2017)	mg/l	341	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	25.8	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	128	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	24	200
13	Nitrate as NO3	APHA 23rd Edition -4500- NO3- B	mg/l	8	. 45
14	Fluoride as F	APHA 23rd Edition -4500-F B&D	mg/l	0.23	1
15	Total Hardness as CaCO3	IS 3025 (Part 21)-2009(RA:2019)	mg/l	160	200
16	Calcium Hardness as Ca	IS 3025 (Part 40)-1991 (RA:2019)	mg/l	45	75
17	Magnesium Hardness as Mg	APHA 23rd Edition-3500 Mg B	mg/l	11.5	30

Contd.....



S-Spotula S. Dharani Quality Manager

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A. Robson Chinnadurai Technical Manager-Lab

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Report No : ABCTL/2022/10/GW2			
Sample Description	1	GW2 - Balanda Village	
Date of Report	:	10-11-2022	

Page 2 of 2 Acceptable Limit as per IS **Test Methods** Unit Results S.No **Test Parameters** 10500:2012 76 Not specified IS: 3025 Part 45-1993 (Reaff:2019) mg/l Sodium as Na 18 2.9 Not specified IS: 3025 Part 45-1993 (Reaff:2019) 19 Potassium as K mg/l 16.3 Not specified APHA 23rd Edition -4500-SiO2- D mg/l 20 Silica as SiO2 0.18 Iron as Fe IS 3025 (Part 53)-1987 (RA:2019) mg/l 21 BDL(< 0.01)0.1 APHA 23rd Edition -3111B mg/l 22 Manganese as Mn 0.05 IS 3025 (Part 65)-2022 BDL(< 0.01) mg/l 23 Total Chromium as Cr BDL(< 0.01)0.01 mg/l IS 3025 (Part 65)-2022 24 Lead as Pb Zinc as Zn IS 3025 (Part 65)-2022 mg/l BDL(< 0.01)5 25 BDL(< 0.003 IS 3025 (Part 65)-2022 mg/l 26 Cadmium as Cd 0.003)0.05 BDL(< 0.01)27 IS 3025 (Part 65)-2022 mg/l Copper as Cu 0.02 BDL(< 0.01)IS 3025 (Part 65)-2022 mg/l 28 Nickel as Ni BDL(< 0.01)0.01 29 Arsenic as As IS 3025 (Part 65)-2022 mg/l Not specified IS:3025:Part39:1991(Reaff:2019) BDL(<1) mg/l Oil & Grease 30 Microbiology Parameter: MPN/ <2 31 **Total Coliforms** IS 1622 -1981 RA 2019 100ml

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

.....END OF REPORT

s India 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.

Page 1 of 2 Sample Details:

Report Number	ABCTL/2022/10/GW3	Sample Drawn By	Laboratory
Sample Description	Ground Water	Sampling Method	IS: 3025 - Part 1
Location Sampling	GW3 - Kukudang Village	Date of Receipt	24-10-2022
Sample Condition	Good	Analysis commenced on	24-10-2022
Date of Sampling	21-10-2022	Report Date	10-11-2022

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	0.8	1
5	pH at 25 °C	IS 3025 (Part 11)-1983(RA:2017)	-	7.36	6.5-8.5
6	Total dissolved solids	IS 3025 (Part 16)-1984 (RA: 2017)	mg/l	317	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	25.6	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	118	200
11	Chloride as Cl-	IS 3025 (Part 32)-1988 (RA: 2019)	mg/l	96	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	6	45
14	Fluoride as F	APHA 23rd Edition -4500-F B&D	mg/l	0.18	1
15	Total Hardness as CaCO3	IS 3025 (Part 21)-2009(RA:2019)	mg/l	142	200
16	Calcium Hardness as Ca	IS 3025 (Part 40)-1991 (RA:2019)	mg/l	43	75
17	Magnesium Hardness as Mg	APHA 23rd Edition-3500 Mg B	mg/l	8.4	30
					C+-1

Contd.....



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 No	:	ABCTL/2022/10/GW3
Sample Description	:	GW3 - Kukudang Village
Date of Report	:	10-11-2022

Dogo 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	66	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	21	Not specified
21	Iron as Fe	IS 3025 (Part 53)-1987 (RA:2019)	mg/l	0.23	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)-2022	mg/l	BDL(< 0.01)	0.05
24	Lead as Pb	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	0.01
25	Zinc as Zn	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	5
26	Cadmium as Cd	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.003)	0.003
27	Copper as Cu	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	0.05
28	Nickel as Ni	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	0.02
29	Arsenic as As	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	0.01
30	Oil & Grease	IS:3025:Part39:1991(Reaff:2019)	mg/l	BDL(< 1)	Not specified
Microb	oiology Parameter:		- (1)		
31	Total Coliforms	IS 1622 -1981 RA 2019	MPN/ 100ml	< 2	-

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

CHENNA 600 098

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



C- From P 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.

Sample Details: Page 1 of 2

Report Number	ABCTL/2022/10/SW1	Sample Drawn By	Laboratory
Sample Description	Surface Water	Sampling Method	IS: 3025 - Part 1
Location Sampling	SW1 - Pump House	Date of Receipt	24-10-2022
Sample Condition	Good	Analysis commenced on	24-10-2022
Date of Sampling	21-10-2022	Report Date	10-11-2022

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	1.9	1
3	pH at 25 °C	IS 3025 (Part 11)-1983(RA:2017)	12	7.66	6.5-8.5
4	Total dissolved solids	IS 3025 (Part 16)-1984 (RA: 2017)	mg/l	194	500
5	Total suspended Solids	IS: 3025 Part 17-1984 (Reaff: 2017)	mg/l	3	Not Specified
6	Temperature	APHA 23rd EDITION 2550 B	°C	26.4	Not Specified
7	Total Alkalinity as CaCO3	IS 3025 (Part 23)- 1986(RA:2019)	mg/l	72	200
8	Chloride as Cl-	IS 3025 (Part 32)-1988 (RA: 2019)	mg/l	55	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	0.11	1
12	Total Hardness as CaCO3	IS 3025 (Part 21)-2009(RA:2019)	mg/l	74	200
13	Calcium Hardness as Ca	IS 3025 (Part 40)-1991 (RA:2019)	mg/l	23	75
14	Magnesium Hardness as Mg	APHA 23rd Edition-3500 Mg B	mg/l	3.5	30
15	Dissolved Oxygen	IS:3025:Part-38:1989 (Reaff:2019)	mg/l	6.9	Not Specified
16	COD	IS:3025:Part-58:2006(Reaff:2017)	mg/l	12	Not Specified
17	BOD	IS:3025:Part-44:1993 (Reaff:2019)	mg/l	BDL(<2)	Not Specified
			V-1		Contd

Contd.....





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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 no	:	ABCTL/2022/10/SW1	
Sample description	:	SW1 - Pump House	
Date of report	:	10-11-2022	

Page 2 of 2 Acceptable Limit as per IS **Test Methods** Unit Results S.No **Test Parameters** 10500:2012 Not Specified IS: 3025 Part 45-1993 (Reaff: 2019) 41 mg/l Sodium as Na 18 Not Specified IS: 3025 Part 45-1993 (Reaff: 2019) 2.2 mg/l Potassium as K 19 IS 3025 (Part 53)-1987 (RA:2019) mg/l 0.16 1 20 Iron as Fe BDL(< 0.01)0.1 APHA 23rd Edition -3111B mg/l Manganese as Mn 21 0.05 IS 3025 (Part 65)-2022 mg/l BDL(< 0.01)Total Chromium as Cr 22 0.01 BDL(< 0.01)IS 3025 (Part 65)-2022 mg/l 23 Lead as Pb 5 0.05 IS 3025 (Part 65)-2022 mg/l 24 Zinc as Zn 0.003 IS 3025 (Part 65)-2022 BDL(< 0.003)25 Cadmium as Cd mg/l IS 3025 (Part 65)-2022 mg/l BDL(< 0.01) 0.05 26 Copper as Cu 0.02 IS 3025 (Part 65)-2022 mg/l BDL(< 0.01)27 Nickel as Ni 0.01 IS 3025 (Part 65)-2022 BDL(< 0.01)Arsenic as As mg/l 28 Not Specified IS:3025:Part39:1991(Reaff:2019) BDL(<1)Oil & Grease mg/l 29 Microbiology Parameter: MPN/ 500 IS 1622 -1981 RA 2019 Total Coliforms 100ml

BDL - Below Detection Limit.

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



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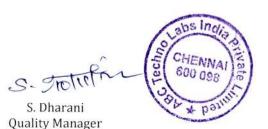
M/s Talcher Fertilizers Limited., (FCIL, Talcher Unit), Technical Building (JV Site Office) Post- Vikrampur, Dist- Angul (Odisha State) PIN-759 106.

Sample Details: Page 1 of 2

Report Number	ABCTL/2022/10/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	24-10-2022
Sample Condition	Good	Analysis commenced on	24-10-2022
Date of Sampling	21-10-2022	Report Date	10-11-2022

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	40	5
2	Turbidity	IS 3025 (Part 10)-1984(RA:2017)	NTU	6.3	1
3	pH at 25 °C	IS 3025 (Part 11)-1983(RA:2017)	-	7.81	6.5-8.5
4	Total dissolved solids	IS 3025 (Part 16)-1984 (RA: 2017)	mg/l	266	500
5	Total suspended Solids	IS: 3025 Part 17-1984 (Reaff: 2017)	mg/l	8	Not Specified
6	Temperature	APHA 23rd EDITION 2550 B	°C	26.9	Not Specified
7	Total Alkalinity as CaCO3	IS 3025 (Part 23)- 1986(RA:2019)	mg/l	90	200
8	Chloride as Cl-	IS 3025 (Part 32)-1988 (RA: 2019)	mg/l	75	250
9	Sulphate as SO4	APHA 23rd Edition -4500-SO42- E	mg/l	20	200
10	Nitrate as NO3	APHA 23rd Edition -4500- NO3- B	mg/l	9	45
11	Fluoride as F	APHA 23rd Edition -4500-F B&D	mg/l	0.14	1
12	Total Hardness as CaCO3	IS 3025 (Part 21)-2009(RA:2019)	mg/l	116	200
13	Calcium Hardness as Ca	IS 3025 (Part 40)-1991 (RA:2019)	mg/l	31	75
14	Magnesium Hardness as Mg	APHA 23rd Edition-3500 Mg B	mg/l	9.3	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	20	Not Specified
17	BOD	IS:3025:Part-44:1993 (Reaff:2019)	mg/l	2.3	Not Specified
					Contd

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/2022/10/SW2
Sample description	:	SW2- River Near Jatia Bridge
Date of report	:	10-11-2022

Page 2 of 2 Acceptable Results Limit as per IS S.No **Test Parameters Test Methods** Unit 10500:2012 IS: 3025 Part 45-1993 (Reaff: 2019) 56 Not Specified Sodium as Na mg/l 18 Potassium as K IS: 3025 Part 45-1993 (Reaff: 2019) 2.7 Not Specified 19 mg/l IS 3025 (Part 53)-1987 (RA:2019) 20 Iron as Fe mg/l 0.21 1 Manganese as Mn APHA 23rd Edition -3111B BDL(< 0.01)0.1 21 mg/l 0.05 22 Total Chromium as Cr IS 3025 (Part 65)-2022 mg/l BDL(< 0.01)IS 3025 (Part 65)-2022 0.01 23 Lead as Pb mg/l BDL(< 0.01)5 IS 3025 (Part 65)-2022 24 Zinc as Zn mg/l 0.05 25 Cadmium as Cd IS 3025 (Part 65)-2022 BDL(<0.003) 0.003 mg/l IS 3025 (Part 65)-2022 BDL(< 0.01)0.05 26 Copper as Cu mg/l 0.02 IS 3025 (Part 65)-2022 BDL(< 0.01)27 Nickel as Ni mg/l 28 IS 3025 (Part 65)-2022 BDL(< 0.01) 0.01 Arsenic as As mg/l 29 Oil & Grease IS:3025:Part39:1991(Reaff:2019) mg/l BDL(< 1) Not Specified Microbiology Parameter: MPN/ IS 1622 -1981 RA 2019 1600 30 **Total Coliforms** 100ml

BDL - Below Detection Limit.

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



S. Dharani Quality Manager



Dr. M Krishna Moorthy Microbiology

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TEST REPORT

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> Page 1 of 2 Sample Details:

		1 1000 10 10000 00000	
Report Number	ABCTL/2022/10/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	24-10-2022
Sample Condition	Good	Analysis commenced on	24-10-2022
Date of Sampling	21-10-2022	Report Date	10-11-2022

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	7	5
2	Turbidity	IS 3025 (Part 10)-1984(RA:2017)	NTU	2.6	1
3	pH at 25 °C	IS 3025 (Part 11)-1983(RA:2017)	2	7.46	6.5-8.5
4	Total dissolved solids	IS 3025 (Part 16)-1984 (RA: 2017)	mg/l	227	500
5	Total suspended Solids	IS: 3025 Part 17-1984 (Reaff: 2017)	mg/l	3	Not Specified
6	Temperature	APHA 23rd EDITION 2550 B	°C	26.6	Not Specified
7	Total Alkalinity as CaCO3	IS 3025 (Part 23)- 1986(RA:2019)	mg/l	82	200
8	Chloride as Cl-	IS 3025 (Part 32)-1988 (RA: 2019)	mg/l	66	250
9	Sulphate as SO4	APHA 23rd Edition -4500-SO42- E	mg/l	17	200
10	Nitrate as NO3	APHA 23rd Edition -4500- NO3- B	mg/l	3	45
11	Fluoride as F	APHA 23rd Edition -4500-F B&D	mg/l	0.13	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	27	75
14	Magnesium Hardness as Mg	APHA 23rd Edition-3500 Mg B	mg/l	5.5	30
15	Dissolved Oxygen	IS:3025:Part-38:1989 (Reaff:2019)	mg/l	6.9	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

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S. Dharani Quality Manager

India 600 096



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TEST REPORT

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Report no	:	ABCTL/2022/10/SW3
Sample description	:	SW3 - River PTBS Thermal Area
Date of report	:	10-11-2022

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	48	Not Specified
19	Potassium as K	IS: 3025 Part 45-1993 (Reaff:2019)	mg/l	1.4	Not Specified
20	Iron as Fe	IS 3025 (Part 53)-1987 (RA:2019)	mg/l	0.15	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)-2022	mg/l	BDL(< 0.01)	0.05
23	Lead as Pb	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	0.01
24	Zinc as Zn	IS 3025 (Part 65)-2022	mg/l	0.03	5
25	Cadmium as Cd	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.003)	0.003
26	Copper as Cu	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	0.05
27	Nickel as Ni	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	0.02
28	Arsenic as As	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	0.01
29	Oil & Grease	IS:3025:Part39:1991(Reaff:2019)	mg/l	BDL(<1)	Not Specified
Microb	oiology Parameter:				
30	Total Coliforms	IS 1622 -1981 RA 2019	MPN/ 100ml	1100	-

BDL - Below Detection Limit.

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



S. Dharani Quality Manager

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Microbiology

A. Robson Chinnadurai Technical Manager-Lab

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18

19

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/SW2	
Sample description	:	SW2- River Near Jatia Bridge	
Date of report	:	30-09-2022	
	111		Page 2 of 2

Unit

mg/l

mg/l

Results

48

1.8

Test Methods

IS: 3025 Part 45-1993 (Reaff: 2019)

IS: 3025 Part 45-1993 (Reaff: 2019)

Limit as per IS 10500:2012 Not Specified Not Specified

Acceptable

20	Iron as Fe	IS 3025 (Part 53)-1987 (RA:2019)	mg/l	0.21	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)-2022	mg/l	BDL(< 0.01)	0.05
23	Lead as Pb	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	0.01
24	Zinc as Zn	IS 3025 (Part 65)-2022	mg/l	0.10	5
25	Cadmium as Cd	IS 3025 (Part 65)-2022	mg/l	BDL(<0.003)	0.003
26	Copper as Cu	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	0.05
27	Nickel as Ni	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	0.02
28	Arsenic as As	IS 3025 (Part 65)-2022	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	>1600	×

Note: BDL - Below Detection Limit.

Test Parameters

Sodium as Na

Potassium as K

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





S. Dharani

Quality Manager

Verified by

Microbiology

A. Robson Chinnadurai Technical Manager-Lab

Authorised Signatory

Terms and conditions:



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TC - 5770

(An ISO: 9001, ISO: 14001, ISO: 45001 & ISO: 22000 Certified Company)

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

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	21-09-2022
Sample Condition	Good	Analysis commenced on	22-09-2022
Date of Sampling	19-09-2022	Report Date	30-09-2022

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	1
3	pH at 25 °C	IS 3025 (Part 11)-1983(RA:2017)	-	7.51	6.5-8.5
4	Total dissolved solids	IS 3025 (Part 16)-1984 (RA: 2017)	mg/l	213	500
5	Total suspended Solids	IS: 3025 Part 17-1984 (Reaff: 2017)	mg/l	2	Not Specified
6	Temperature	APHA 23rd EDITION 2550 B	°C	26.1	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	59	250
9	Sulphate as SO4	APHA 23rd Edition -4500-S042- E	mg/l	14	200
10	Nitrate as NO3	APHA 23rd Edition -4500- NO3- B	mg/l	3	45
11	Fluoride as F	APHA 23rd Edition -4500-F B&D	mg/l	0.11	1
12	Total Hardness as CaCO3	IS 3025 (Part 21)-2009(RA:2019)	mg/l	88	200
13	Calcium Hardness as Ca	IS 3025 (Part 40)-1991 (RA:2019)	mg/l	29	75
14	Magnesium Hardness as Mg	APHA 23rd Edition-3500 Mg B	mg/l	3.7	30
15	Dissolved Oxygen	IS:3025:Part-38:1989 (Reaff:2019)	mg/l	6.8	Not Specified
16	COD	IS:3025:Part-58:2006(Reaff:2017)	mg/l	12	Not Specified
17	BOD	IS:3025:Part-44:1993 (Reaff:2019)	mg/l	BDL(<2)	Not Specified

Contd.....





S. Dharani Quality Manager

A. Robson Chinnadurai Technical Manager-Lab

Authorised Signatory

Verified by

Terms and conditions:

•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 seven 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



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ISSUED TO:

TEST REPORT

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

Report no	- 8	ABCTL/2022/03/SW3	
Sample description	:/	SW3 - River PTBS Thermal Area	
Date of report	:	30-09-2022	

/		9			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	44	Not Specified		
19	Potassium as K	IS: 3025 Part 45-1993 (Reaff:2019)	mg/l	1.8	Not Specified		
20	Iron as Fe	IS 3025 (Part 53)-1987 (RA:2019)	mg/l	0.11	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)-2022	mg/l	BDL(< 0.01)	0.05		
23	Lead as Pb	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	0.01		
24	Zinc as Zn	IS 3025 (Part 65)-2022	mg/l	0.08	5		
25	Cadmium as Cd	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.003)	0.003		
26	Copper as Cu	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	0.05		
27	Nickel as Ni	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	0.02		
28	Arsenic as As	IS 3025 (Part 65)-2022	mg/l	BDL(< 0.01)	0.01		
29	Oil & Grease	IS:3025:Part39:1991(Reaff:2019)	mg/l	BDL(<1)	Not Specified		
Microb	Microbiology Parameter:						
30	Total Coliforms	IS 1622 -1981 RA 2019	MPN/ 100ml	900	=		

BDL - Below Detection Limit.

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





S. Dharani Quality Manager

Verified by



A. Robson Chinnadurai Technical Manager-Lab

Authorised Signatory

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.



