BY SPEED POST

CP-99/39/2024-IPC-I-HO-CPCB-HO-934

April 29, 2024

To

M/s Paradeep Phosphates Limited
PPL Township
P.O. Paradeep,
Dist. Jagatsinghpur
Odisha-754145

Sub: Directions under Section 5 of the Environment (Protection) Act, 1986 - reg.

WHEREAS, fertilizer industries are identified as one of the 17 categories of highly polluting industries which have been discharging environmental pollutants directly or indirectly into the ambient air and water, having potential threat to cause adverse effect on the water and air quality; and

WHEREAS, the Central Government has notified the standards for discharge of environmental pollutants from various categories of industries under the Environment (Protection) Act, 1986 and the rules framed there under; and

WHEREAS, it is obligatory on the part of industries to install and operate Effluent Treatment plant (ETP) to comply with the effluent discharge standards as notified under the Environment (Protection) Act, 1986 and the Rules framed thereunder and also to meet the consent conditions granted by Odisha State Pollution Control Board (OSPCB); and

WHEREAS, Hon'ble Supreme Court of India in the matter of Paryavaran Suraksha Samiti Vs Union of India & Others dated 22/02/2017 directed that no industry which requires "consent to operate" from the concerned Pollution Control Board, is permitted to function, unless it has a functional effluent treatment plant, which is capable to meet the prescribed norms for removing the pollutants from the effluent, before it is discharged; and

WHEREAS M/s Paradeep Phosphates, Limited, PPL Township Dist.: Jagatsinghpur, Odisha-754145, (the Unit) was inspected on January 30 and 31, 2024 by officials of Central Pollution Control Board, Regional Directorate, Kolkata for verification of compliance to the prescribed standards; and

WHEREAS, the inspecting team observed the following non- compliance:

i. The Unit was found operational during visit and manufacturing Di Ammonium Phosphate(DAP) & Nitrogen, Phosphorous, Potassium (NPK) Fertilizers, Sulphuric acid and Phosphoric acid.

ii. As per Consent to operate(CTO) granted by OSPCB, the Unit has to maintain zero liquid discharge during non-monsoon season; however, during inspection the plant was found discharging its untreated effluent in the low-lying area. The aforementioned discharged effluent was observed having pH -3.9, Fluoride - 102.62 mg/l and Phosphate -654.73 mg/l thereby violating Odisha State Pollution Control Board prescribed norms w.r.t pH 6.5-8.5, Fluoride 10 mg/l, and Phosphate 5 mg/l.

iii. The treated effluent from ETP outlet was found violating the discharge norms of OSPCB with respect to Fluoride 19.43 mg/l against 10 mg/l, phosphate 53.67 mg/l against 5 mg/l.

iv. It was observed that the ground water quality at the 5 test wells as well as in the village located near the gypsum pond are not meeting with the norms as prescribed by BIS for drinking water with respect to pH which varies from 9.5-12 against 6.5-8.5, fluoride ranged from 1.34 to 1.73 mg/l against the norms of 1 mg/l, which indicates contamination of ground water due to the leachate from the gypsum pond. The lining of gypsum pond has been damaged/ cracked.

v. All the surface water bodies were found contaminated with the effluent from the Unit with respect to Fluoride ranged from 16.10 mg/l to 981.50 mg/l against the prescribed norms 2 mg/l and Phosphate ranged from 19.47 to 3081.85 mg/l against the prescribed norms 5 mg/l prescribed by OSPCB.

vi. The Atharabanki creek near Gypsum Pond was found contaminated w.r.t Fluoride 3.49 mg/l against the norms 2 mg/l and phosphate 17.11 mg/l against the norms 5 mg/l.

vii. The Storm water drains were filled with the Industrial waste water and found violating the discharge norms with respect to pH 2.7, fluoride 90.44 mg/l, and phosphate 355.39mg/l against the prescribe norms of Odisha State Pollution Control Board i.e. pH 6.5-8.5, Fluoride 2 mg/l, and Phosphate 5 mg/l respectively.

viii. As per Stack monitoring of DAP-B, the concentration of Fluoride was found 11.15 mg/Nm3 against the prescribed value of 10 mg/Nm3.

ix. At the east side, unlined pond of approx. 450 m x 80 m x 1.5m dimensions was found filled with wastewater having pH 2.2, fluoride 981.50 mg/l phosphate 3081.85 mg/l. The degree of contamination in the water body on east side of gypsum pond indicates the improper handling of the effluent and dumping untreated effluent and its sludge in the water body. The surface water samples were collected from the 6 water bodies nearby to Gypsum ponds and except North side of Gypsum pond near culvert. All the surface water bodies including creek were found contaminated with the effluent from the Unit with respect to Fluoride and Phosphate.

x. In the Sulphuric Acid Plant -C Unit, major leakage was found in the Gaseous emission carrying system. As informed, due to wear & tear, the Emission carrying pipe line damaged and causing for emission as the plant was operational.

WHEREAS, the Unit has provided only flow meter and pH parameters for online continuous effluent monitoring system, however since the Unit has the permission to discharge treated effluent in monsoon, it is required provide online continuous effluent monitoring system for Ammonical Nitrogen and Fluoride also; and

WHEREAS, unauthorized discharge of untreated effluent with highly acidic ,fluoride and phosphate content from the Unit ,contamination of surface water including creek and ground water with fluoride and phosphate is likely to cause grave injury to the environment ; and

WHEREAS, on the basis of non-compliance observed,a closure direction under section 5 of Environment (Protection) Act,1986 was issued to the Unit on 21.03.2024 and was directed to close down all operational activities with immediate effect till the following directions are compiled with and written permission to resume operations is obtained from CPCB:

1. The Unit shall maintain zero liquid discharge (ZLD)as per conditions of consent to operate issued by OSPCB.
2. The Unit shall augment / properly maintain its effluent treatment plant ,so that treated effluent meets prescribed norms, in case the effluent has to be discharged as allowed by conditions of consent to operate.
3. The Unit shall treat the effluents stored in the east side pond and shall maintain records of treatment and disposal quality & quantity of treated effluent and disposed sludge. Under no circumstances the aforementioned untreated wastewater shall be discharged or mixed with other water bodies or the sea.
4. A time-bound action plan shall be submitted by the Unit on detailed assessment & restoration of surface water including creek as well as groundwater in & around the Unit.
5. All drains carrying process effluent within the Unit shall be connected to Effluent Treatment Plant (ETP) and any drain / arrangement for unauthorized discharge of effluent shall be immediately dismantled.
6. Industrial effluents shall be transported through properly colour coded pipelines or covered drains. Storm water drains shall be maintained separately to prevent contamination from effluents.
7. The online pH meter installed at ETP shall be properly calibrated.
8. The Unit shall provide online continuous effluent monitoring system for Ammonical Nitrogen and Fluoride also.
9. The leakage of Sulphuric Acid Plant -C Unit shall be rectified immediately to prevent discharge of emissions.
10. The Unit shall augment / properly maintain the air pollution control system so that the discharged emissions comply with prescribed norms.
11. The Unit shall take necessary steps towards repair of lining of gypsum pond and shall provide proper leachate collection and treatment system so as to prevent further contamination of groundwater and surface water bodies. Necessary action shall be taken by the Unit to minimize the environmental impact of gypsum ponds.
12. The Unit shall take necessary action to prevent any emission leakage in future. In case of any accidental leakage of emission / hazardous chemicals, immediate remedial action shall be taken by the Unit with information to Odisha State Pollution Control Board and other concerned authorities.

WHEREAS, the Unit has submitted notarized copy of compliance directions, and self-certificate that the Unit has stopped production w.e.f 01.04.2024 vide letter dated 04.04.2024 and the same has been verified by Odisha State Pollution Control Board (OSPCB) ; and

WHEREAS, CPCB had constituted a three-member committee vide office order dated 01.01.2024 having representative(s) from CPCB and MoEF&CC for examination and recommendation for revocation of the closure directions issued by CPCB; and

WHEREAS, the submissions of the Unit were examined and deliberated upon by the revocation committee in its meeting conducted on 12.04.2024. The committee observed certain shortcomings requiring further improvement in the action taken by the Unit w.r.t. directions issued by the Unit; and

WHEREAS, the revocation committee during its meeting on 12.04.2024 made following recommendations which were communicated to the Unit vide letter dated 18.04.2024:

1. Regarding submissions of the Unit w.r.t. Directive No. 1, the Committee recommended that the Unit shall ensure that the web (PTZ) cameras as well as online flow meters with data connectivity to CPCB are located at all the effluent discharge points as well as at effluent recycling points; and the web (PTZ) camera as well as online flow meters shall be provided as per CPCB guidelines available on website of CPCB: https://cpcb.nic.in/ocems1/ ; and The installation and data connectivity of aforementioned flow meters and web cameras shall be accomplished in a reasonable time and the Unit shall submit time bound action plan for the same.
2. Regarding submissions of the Unit w.r.t. Directive No. 2, the Committee recommended that the Unit should provide intermediate pH monitoring mechanisms in terms of pH correction for efficient operation of ETP. The committee also recommended that IIT Kharagpur shall assess generation of effluent and efficiency of currently installed ETP as well as feasibility of ZLD during non-monsoon season by 5th June, 2024. Further, effluent generation during monsoon be also assessed considering contaminated run off generation which require treatment & their channelization to ETP, effluent management from ponds, recycling, etc. vis-a-vis installed ETP capacity and capabilities to meet the discharge standards prescribed by OSPCB; and the contract of engagement of IIT Kharagpur may be re-worked aligning to above scope of work. The committee also recommended that the Unit shall submit action plan as per recommendations of IIT Kharagpur, as above, immediately after submission of report by IIT Kharagpur.
3. Regarding submissions of the Unit w.r.t. Directive No. 3 , the Committee recommended that till the lining work is completed, the Unit shall take necessary steps to check the rain water collected in the perimeter of ditch during rainy season for any contamination and shall ensure its treatment accordingly. The committee also recommended that necessary records of such rain water and/or seepage generation, their characteristics, treatment, etc. in this regard be properly maintained and submitted to CPCB and OSPCB by the Unit on monthly basis till lining of the perimeter ditch is commissioned.
4. Regarding submissions of the Unit w.r.t. Directive No. 4 , the Committee recommended that the scope of work outlined in the Project of Assessment of Contamination Soil, Surface Water and Groundwater through NEERI may be revisited to include a step-wise approach as below:

    i. To conduct detailed environmental site assessment to delineate the contamination in ground water as well as surface water bodies, so as to assess the need for the need for remediation of ground and surface water bodies;
    ii. NEERI shall also present a DPR for remediation of contaminated site, if required, which shall be executed by an agency having expertise in assessment /remediation of contaminated sites. The remediation plan outlined in such DPR along with Techno-financial proposal shall be presented before OSPCB for its approval.
    iii. NEERI may monitor the implementation of remediation activities, if required. NEERI may also assess the effectiveness of lining and strengthening 2.2 km long peripheral ditch.
    iv. As per the guidelines of CPCB "Guidelines on Implementing Liabilities for Environmental Damages due to Handling & Disposal of Hazardous Waste and

Penalty" a Bank guarantees of Rs. 20 lakhs may be issued to OSPCB towards Assessment liability.

v. For assessment of site, CPCB/ MoEF&CC guidelines (a) Reference Document on Identification, Inspection and Assessment of Contaminated Sites, and (b) Guidance document for assessment and remediation of contaminated sites in India may be referred.

vi. The contract of engagement of NEERI may be re-worked aligning to above scope of work.

5. Regarding submissions of the Unit w.r.t. Directive No. 8 , the Committee recommended that the Unit shall install the requisite pH, Ammonical Nitrogen and Fluoride analysers at all the treated effluent / storm water discharge points by 07.06.2024 with data connectivity to CPCB and SPCB server.
6. Regarding submissions of the Unit w.r.t. Directive No. 10, the Committee recommended that the spent scrubber effluent/bleed off effluent from scrubber shall be treated by the Unit as per conditions of consent to operate prescribed/permitted by OSPCB.
7. Regarding submissions of the Unit w.r.t. Directive No. 11, the Committee recommended that the Unit shall refer CPCB "Guidelines for Management, Handling, Utilisation and Disposal of Phosphogypsum Generated from Phosphoric Acid Plants" for preparation of subsurface and laying 1.5mm HDPE geomembrane for peripheral ditch canal. The committee also recommended that the work shall be carried out in a segmental manner with no spillage and damage to adjoining areas and the effectiveness of repairing the peripheral ditch shall be monitored by NEERI who is being engaged by the Unit. It was further recommended that the Unit shall submit time bound action plan to expedite the evacuation of gypsum from old gypsum pond ; and the Unit shall ensure disposal of phosphogypsum and shall ensure groundwater monitoring in accordance with conditions no. 18 & 19 specified under the heading 'Special Conditions' stipulated in CTO.

WHEREAS, the Unit vide letters dated 19.04.2024 and 21.04.2024 submitted the action taken report w.r.t. recommendations made by revocation committee during its meeting on 12.04.2024; and

WHEREAS, the reply of the Unit along with documents regarding action taken so far and the action plan submitted for complying with directions of CPCB were examined and deliberated upon by the revocation committee in its another meeting conducted on 23.04.2024; and

WHEREAS, after the deliberations, the Committee recommended that conditional revocation of closure directions may be given for 90 days subject to following conditions to be complied by the Unit:

1. The Unit shall ensure that treatment of generated effluent and its reuse in the process so as to maintain Zero Liquid Discharge during non-monsoon season. It shall maintain the connectivity to ensure real time data from cameras and online flow meters for verification of ZLD compliance. The records of quantity of effluent generated, treated and reused shall be maintained.
2. IIT Kharagpur shall assess generation of effluent and efficiency of currently installed ETP as well as feasibility of ZLD during non-monsoon season by 5th June, 2024. Further, effluent generation during monsoon shall also be assessed in the study report considering contaminated run off generation which require treatment & their

channelization to ETP, effluent management from ponds, recycling, etc. vis-a-vis installed ETP capacity and capabilities to meet the discharge standards prescribed by OSPCB.

3. The Unit shall maintain logbook /records of old gypsum pond and perimeter ditch w.r.t accumulated water in pond area, rain water and/or seepage collected into perimeter ditch, its characteristics, treatment, etc. on daily basis and shall submit monthly report to CPCB and SPCB. The Unit shall get permission from OSPCB for reusing wastewater from gypsum ponds in Phosphoric acid plant. Log books shall also be maintained on the quantity of water being used form old and new gypsum ponds after treatment, the treated water quality including the quantity being transferred from old pond. Further the Unit shall complete the lining of perimeter ditch of the old gypsum pond as per CPCB guidelines by December 2024.NEERI shall monitor the effectiveness of lining and strengthening 2.2 km long peripheral ditch
4. The progress report on activities of NEERI as per the specified scope shall be submitted to CPCB and OSPCB on monthly basis. Further, based on the detailed assessment report of NEERI the Unit shall prepare Detailed Project Report (DPR) for remediation, if applicable, by engaging an agency having expertise in assessment and remediation of contaminated site. The assessment and remediation work shall be supervised by OSPCB through a technical expert committee. If remediation work is applicable, the Unit shall deposit BG towards remediation liability to OSPCB for execution of remediation activity as per DPR.
5. The Unit shall ensure that all process effluent be transferred through properly colour coded and closed pipelines to ETP for treatment and no process effluent shall be transferred in open drain to ETP.
6. The Unit shall ensure periodic calibration of all OCEMS and ensure real-time data transmission to SPCB and CPCB servers
7. The Unit shall install the requisite ammonical nitrogen analysers and fluoride analysers at all the treated effluent / storm water discharge outlet points by 07.06.2024 with data connectivity to CPCB and SPCB server.
8. The Unit shall treat the scrubber effluent as per CTO conditions. In case, the Unit desires to recycle scrubber effluent in the process, a permission from OSPCB shall be obtained for the same. Further, the Unit shall maintain scrubber system attached to phosphoric acid plant so as to comply with prescribed norms.
9. The Unit shall complete the lining of all four compartments of old gypsum pond in phased manner with minimum liner thickness of 1.5mm of HDPE geo-membrane and shall also provide leachate collection, surface run off collection etc as outlined in CPCB guidelines. Lining of north-western and south-west compartments shall be completed by March 2027 and similarly, lining of north-eastern and south-east compartments shall be completed by June 2028. A quarterly progress report in this regard shall be lined / evacuated space of Gypsum Pond –I shall be done after obtaining permission from OSPCB.

AND WHEREAS, the Ministry of Environment & Forests, Government of India, vide Notifications No. S. O. 157 (E) of 27.02.1996 and S. O. 730 (E) dated 10.07.2002, has delegated the powers vested under Section 5 of the Environment (Protection) Act, 1986 (29 of 1986) to the Chairman, Central Pollution Control Board, to issue directions to any industry or any local body or any other authority for violations of the standards and rules notified under the Environment (Protection) Rules, 1986 and amendment thereof; and

NOW, THEREFORE, in exercise of powers vested to Chairman CPCB under Section 5 of the Environment (Protection) Act, 1986, and in view of compliance with relevant direction under reference, the closure directions issued under the Section 5 of the Environment (Protection) Act, 1986 to M/s Paradeep Phosphates, Limited, PPL Township Dist.: Jagatsinghpur, Odisha-754145 (the Unit) on 21.03.2024 is hereby conditionally revoked for 90 days from the date of issuance of these directions, with following conditions:

1. The Unit shall be permitted to operate for 90 days from the date of commencement of the plant operation.
2. The Unit shall ensure that treatment of generated effluent and its reuse in the process so as to maintain Zero Liquid Discharge during non-monsoon season. It shall maintain the connectivity to ensure real time data from cameras and online flow meters for verification of ZLD compliance. The records of quantity of effluent generated, treated and reused shall be maintained.
3. IIT Kharagpur shall assess generation of effluent and efficiency of currently installed ETP as well as feasibility of ZLD during non-monsoon season by 5th June, 2024. Further, effluent generation during monsoon shall also be assessed in the study report considering contaminated run off generation which require treatment & their channelization to ETP, effluent management from ponds, recycling, etc. vis-a-vis installed ETP capacity and capabilities to meet the discharge standards prescribed by OSPCB.
4. The Unit shall maintain logbook /records of old gypsum pond and perimeter ditch w.r.t accumulated water in pond area, rain water and/or seepage collected into perimeter ditch, its characteristics, treatment, etc. on daily basis and shall submit monthly report to CPCB and SPCB. The Unit shall get permission from OSPCB for reusing wastewater from gypsum ponds in Phosphoric acid plant. Log books shall also be maintained on the quantity of water being used form old and new gypsum ponds after treatment, the treated water quality including the quantity being transferred from old pond. Further the Unit shall complete the lining of perimeter ditch of the old gypsum pond as per CPCB guidelines by December 2024.NEERI shall monitor the effectiveness of lining and strengthening 2.2 km long peripheral ditch
5. The progress report on activities of NEERI as per the specified scope shall be submitted to CPCB and OSPCB on monthly basis. Further, based on the detailed assessment report of NEERI the Unit shall prepare Detailed Project Report (DPR) for remediation, if applicable, by engaging an agency having expertise in assessment and remediation of contaminated site. The assessment and remediation work shall be supervised by OSPCB through a technical expert committee. If remediation work is applicable, the Unit shall deposit BG towards remediation liability to OSPCB for execution of remediation activity as per DPR.
6. The Unit shall ensure that all process effluent be transferred through properly colour coded and closed pipelines to ETP for treatment and no process effluent shall be transferred in open drain to ETP.
7. The Unit shall ensure periodic calibration of all OCEMS and ensure real-time data transmission to SPCB and CPCB servers.
8. The Unit shall install the requisite ammonical nitrogen analysers and fluoride analysers at all the treated effluent / storm water discharge outlet points by 07.06.2024 with data connectivity to CPCB and SPCB server.
9. The Unit shall treat the scrubber effluent as per CTO conditions. In case, the Unit desires to recycle scrubber effluent in the process, a permission from OSPCB shall be obtained for the same. Further, the Unit shall maintain scrubber system attached to phosphoric acid plant so as to comply with prescribed norms.

10. The Unit shall complete the lining of all four compartments of old gypsum pond in phased manner with minimum liner thickness of 1.5mm of HDPE geo-membrane and shall also provide leachate collection, surface run off collection etc as outlined in CPCB guidelines. Lining of north-western and south-west compartments shall be completed by March 2027 and similarly, lining of north-eastern and south-east compartments shall be completed by June 2028. A quarterly progress report in this regard shall be submitted to SPCB/CPCB till the work is completed. Further, utilization of lined / evacuated space of Gypsum Pond –I shall be done after obtaining permission from OSPCB.
11. The Unit shall intimate the date of resumption of plant operation to CPCB.

In case of failure to comply with the aforesaid directions, necessary action as deemed fit under the provision of the Environment (Protection) Act, 1986 including re-issuance of closure directions including imposition of environmental compensation will be taken by Central Pollution Control Board against the Unit.

29/4

(Tanmay Kumar)
Chairman

Copy to:

1.	The Chairman Odisha Pollution Control Board, A-118, Nilakanta Nagar, Unit –VIII, Bhubaneshwar – 751012.	:	
2.	Executive Engineer TP Central Odisha Distribution Limited, AT- Paradeep Ghar, NRLOCK P.S., Paradeep Bhubaneswar, Odisha 754141	:	With request to restore industrial electricity supply of Unit.
3.	The Additional Secretary (CP Division) Ministry of Environment, Forests and Climate Change, Prithvi Wing, 5th Floor, Room No. 216, Indira Paryavaran Bhawan Aliganj, Jor Bagh Road, New Delhi–110003		
4.	The Regional Director Central Pollution Control Board 'South end Conclave' Block-502, 5th & 6th Floor, 1582, Razidanga, Main Road, Kolkata- 70010	:	To re-inspect the Unit within 90 days and verify the compliance of directions dated 21.03.2024 and conditional revocation directions.
5.	D.H., IT, CPCB		
6.	D.H. IPC- VI, CPCB		

(Bharat Kumar Sharma)
Member Secretary