

Speed Post

B-190198/NGRBA(RG)/CPCB/Distillery/21/2017-18 14134

Dec 20th, 2018

Dec 24th, 2018

To,

**M/s Radico Khaitan Ltd.,
Bareilly Road Rampur,
(A Unit of Radico Khaitan)
Rampur- 244901, (U.P.)**

**DIRECTION UNDER SECTION 5 OF THE ENVIRONMENT (PROTECTION) ACT,
1986**

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, the Ministry of Environment & Forests, Govt. of India, vide notification S.O.157(E) of 27.02.1996 has delegated powers vested under Section 5 of the Environment (Protection) Act, 1986 (29 of 1986) to the Chairman, Central Pollution Control Board (CPCB), to issue direction to any industry, Municipal Corporation, Municipal Council, Cantonment Board to any local or other Authority for the violation of emission and effluent standards notified under the Environment (Protection) Rules, 1986; and

WHEREAS, it is obligatory on the part of industries to install effluent treatment plants (ETPs) to comply with the effluent discharge standards as notified under the Environment (Protection) Act, 1986 and the Rules framed there under and also to meet the consent conditions granted by State Pollution Control Board (SPCBs) / Pollution Control Committees (PCCs); and

WHEREAS, M/s Radico Khaitan Ltd., (Distillery Division) Uttarakhand (hereinafter referred as 'the Unit') is involved in the production of extra neutral alcohol and rectified spirit using molasses as raw material and;

WHEREAS, CPCB had issued direction on 07.12.2015 under section 18(1)(b) of Water Act, 1974 to Uttar Pradesh Pollution Control Board for ensuring that the molasses based distilleries including yeast manufacturing units in the state of U.P shall achieve zero liquid discharge, as per the options specified in the direction; and

(Cond..2/-)

WHEREAS, in compliance with Hon'ble NGT order (O.A No. 316 of 2017) dated 30th May 2017, teams from CPCB carried out sampling of River Kosi, from Almora in Uttarakhand to Rampur drain in Uttar Pradesh, during the period June 13th to 21st, 2018 ; and

WHEREAS, the unit has been identified as a grossly polluted industry **operating in catchment area of Rampur drain & River Kosi in Uttar Pradesh; and**

WHEREAS, analysis of water samples collected from river Kosi at downstream of confluence of Rampur drain at village Madarpur showed **Colour 929 Hazen, DO-zero, BOD-55 mg/l, COD-153mg/l**, which are indicative of industrial pollution ; and

WHEREAS analysis of water samples collected from Shahbad Highway, after confluence of river Kosi in Ramganaga, showed **Colour 827 Hazen, DO-zero, BOD-60 mg/l, COD-180mg/l**, which are indicative of industrial pollution; and

WHEREAS, the unit, M/s Radico Khaitan Ltd., (Distillery Division), is the only 17 categories of highly polluting industry, operating in catchment area of Rampur drain, U.P and the possibility of discharging spent wash by the unit cannot be ruled out.

AND WHEREAS, CPCB issued show cause notice dated 18.9.2018 under section 5 of Environment (Protection) Act, 1986; and

WHEREAS, public complaints dated 15, Oct, 2018, 03.12.2018 & 11.12.2018 are received against M/s Radico Khaitan Ltd. Rampur; and,

WHEREAS, team of CPCB officials carried out the inspection of M/s Radico Khaitan Limited Bareilly Road, Rampur (U.P.), and monitoring of Rampur drain, River Kosi & River Ramganga, on Nov. 15-16, 2018 and following observations are made;

1. The unit was in operation during the inspection. The unit is engaged in production of Alcohol using molasses and grains as raw materials in two processing units in the same premises.
2. The unit is having installed capacity of 200 KLD for molasses based distillery and 100 KLD for grain based distillery unit.
3. The unit is having a combined license for molasses based distillery and grain based distillery units for production of 1024 Lac Bulk Litres/annum.
4. ZLD system for treatment of spent wash comprises of IMEE (3 stage), Bio-Digesters (06 nos.), clarifiers, dissolved air floatation, (DAF), followed by RO (3nos.) and 6 stage evaporator.
5. The unit has installed mass flow meters at outlet of fermenter, inlet of IMEE, outlet of IMEE, and at inlet and outlet of 6 stage evaporator. All the mass flow meters are connected to CPCB server.

(Contd..3/-)

6. The unit has installed two piezometers at Bio-compost yards at Hitachi site and Ajitpur site.
7. The unit has installed a new 6 stage evaporator since May 2018 for concentration of RO reject from 3 stage RO system.
8. The unit is having a consent to operate under Water Act, 1974 and Air Act, 1981 both having validity up to 31.12.2019.
9. The production record of ten months (Jan 2018 to Oct 2018) shows average production of 4848 KL of Alcohol /Month which indicates that unit has operated at 56.8% of the installed capacity.
10. Effluent Samples collected during inspection from various points in the production process and spent wash treatment system. The analysis results are mentioned below:

S.No.	Sample Description	pH	Total Solids (mg/l)	COD (mg/l)	BOD (mg/l)
1.	Raw Spent Wash from Analyser Bottom	4.61	155008	120392	45846
2.	MEE Condensate	3.08	BDL (<10)	2879	
3.	MEE Concentrate	4.52	2,60,744	1,65,963	58,146
4.	Inlet of storage pond of ETP (Feed to bio-digesters)	4.50	2,65,768	2,17,190	107042
5.	Lamella Inlet (outlet of Digester after degassing)	8.02	1,05,032	-	-
6.	DAF Inlet (Outlet of final Clarifier)	7.99	96,128	81,366	26601
7.	DAF Outlet discharging into R.O Feed tank	8.03	92,136	72,720	29733
8.	3 rd R.O Permeate	6.54	396	180	80
9.	R.O Reject (feed to new evaporator)	7.22	1,46,352	1,15,706	40899
10.	New evaporator (6 stage) Outlet Concentrate (pumped to lagoon)	8.55	1,70,784	1,30,896	44210
11.	Spent wash Spray Hitachi Site	7.82	1,17,752	1,11,989	-
12.	Spent wash Spray Ajeetpur Site	7.60	1,04,344	77,891	-

(Contd..4/-)

11. IMEE condensate, with pH 3.08 and COD 2879 mg/l needs treatment for reuse in production process, such as fermentation dilution & cooling tower make up water, which could be achieved through Condensate Polishing Unit (CPU). Use of MEE condensate without treatment system is not feasible and possibility of discharge of condensate could not be ruled out.
12. Total area available at both Bio-compost yard sites is 56.88 Acres, which is less than the required area 65.032 Acres (corresponding to installed production capacity) calculated based on Standard Operating Procedures for Bio-composting by distillery units. Therefore, the unit has to restrict the production capacity to 7468 KL/month or provide additional land to operate at installed capacity.
13. As per the monthly data provided by the unit, the unit has generated 5,01,413 MT of raw spent wash. Considering 60% vol reduction, the concentrated spent wash is estimated to be 2,00,565 MT and the concentrated spent wash consumed for bio-composting is 133743 MT. The remaining quantity i.e. $2,00,565 - 1,33,743 = 66,822$ MT (58,106 KL), considering sp. gravity as 1.15) shall be in the lagoons. The unit is restricted to store 50% of the storage capacity i.e. $(90,000 \times 0.5) 45,000$ m³ by UPPCB. Since, the spent wash stored was below the 50% capacity. It is observed that spent wash of $(58,106 - 45,000) 13,106$ m³ has not been utilized in bio-composting indicating possibility of unaccounted disposal of spent wash.
14. Analysis of spent wash samples collected from different locations of ZLD system comprising of IMEE, Bio-digesters, clarifiers, RO, 6 stage evaporator system and lagoons at two bio-composting sites indicate that spent wash being utilised for bio-composting contain pH-7.6 to 7.82, Total solids- 104344 and COD – 77891 to 1,11,989 mg/l, as against concentrated spent wash at IMEE outlet containing pH-4.52, Total solids 2,60,744 COD-1,65,963 mg/l, Bio-methanated spent wash at DAF outlet containing pH-8.03, total solid 92,136, COD-72,720 mg/l and concentrated spent wash at outlet of final 6 stage MEE containing pH-8.55, Total solids- 1,70,784, COD-1,30,896 mg/l.
15. It appears that the Unit is utilising bio-methanated spent wash (after bio-digesters) with % Total solids- 9 to 10% as against desired 30% solid concentration (as per CPCB directions dated 7/12/2015) for bio-composting with possibility of bypassing of downstream RO and 6 stage MEE treatment systems/dilution of spent wash at storage lagoons.
16. Before mixing with Radico khaitan drain, Rampur drain water quality shows BOD, COD and colour as 71 mg/l, 228 mg/l and 67 Hazen, respectively & River Kosi before confluence with Rampur drain shows the BOD, COD, and colour value of 21 mg/l, 70 mg/l and 64 Hazen, unit respectively. After mixing with Rampur drain and before confluence with River Ramganga river Kosi water quality shows BOD, COD, and colour value as 44 mg/l, 102 mg/l and 78 Hazen unit, respectively. After mixing with Radico khaitan industrial drain the value of different parameters like BOD, COD and colour of Rampur drain water quality are increases i.e 123 mg/l, 369 mg/l, and 87 Hazen, respectively.

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17. Analysis of water samples collected from **Rampur drain at village Nawabganj near bridge (before confluence with river Kosi)** river shows **Colour 389 Hazen, BOD-113 mg/l, COD-370 mg/l.**
18. Intense odour of spent wash was observed in River Kosi before confluence with Ramganga. The colour at bed of Kosi River at this location is also indicating possibility of spent wash disposal in the past. Odour and colour of spent wash was also observed at Shahabad Road Bridge on River Ramganga after Patwai town.

It is evident that possibility of bypassing of spent wash treatment systems such as RO, MEE installed to achieve ZLD, dilution of spent wash at compost site and bypass of spent wash/condensate could not be ruled out and there is potential adverse impact on water quality of Rampur drain, River Kosi & River Ramganga.

NOW, THEREFORE, in view of the above and exercising powers delegated to the Chairman, Central Pollution Control Board (CPCB) under section 5 of the Environment (Protection) Act, 1986, **the unit is directed to close down all its manufacturing operations with immediate effect and report the same to CPCB immediately and not to restart manufacturing operations till the compliance of following directions:**

1. The unit shall immediately stop by passing spent wash treatment systems such as RO, MEE and shall ensure volume reduction to minimum 40% with 30% solid concentration before bio-composting.
2. The unit shall stop dilution at lagoon at compost site and shall ensure that only spent wash with 30 % solid concentration should be used in bio-composting.
3. The unit shall provide treatment to condensate for reuse in process and shall submit a time bound action plan for the installation of condensate polishing unit (CPU).
4. The unit shall provide adequate compost yard as per standard for procedure (SOP).
5. To install CCTV Cameras at the entrance /exists gate of ETP system.
6. The unit shall take necessary measures for restoration of water quality of Rampur drain & River Kosi and shall submit a time bound action plan. The action plan shall consists of following measures besides other necessary measures.
 - a) The unit shall install wire net/geo-net at confluence point of Rampur drain with river Kosi.
 - b) The unit shall submit an action plan for in-situ treatment of Rampur
 - c) The unit shall carry out de-sludging/ disilting of Rampur drain & river Kosi of following locations;
 - ✓ From D/s of Radico khaitan to confluence with river Kosi.
 - ✓ River Kosi- after confluence with Rampur drains up to 2 kms towards river Ramganga.
7. The unit shall deposit an Environment compensation amount of Rs. 27,00,000/- form the date of issue of Show cause notice dated 18,Sept, 2018 under section 5 of Environment(Protection) Act, 1986 for causing potential damage to water quality of Rampur

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drain, River Kosi & Ramganga. as per Environmental Compensation policy framed in compliance of NGT order dt. 31.08.2018 in OA no. 593/2017.

8. The unit shall seek permission from CPCB before restart of manufacturing operations after compliance of the above directions.

In case of default in compliance with the above directions by the unit, CPCB will be constrained to initiate appropriate action against the unit, in accordance with the provisions of the Environment (Protection) Act, 1986 without any further notice.


(S P SINGH PARIHAR)

CHAIRMAN

Copy to:

1. Chairman

Uttar Pradesh Pollution Control Board,
Building No. TC-12V, Vibhuthi Khand,
Gomti Nagar, Lucknow – 226 010

With request to ensure that the unit complies with the directions.

2. Joint Secretary (CP Division)

Ministry of Environment, Forest & C.C
Prithvi Block, Indira Paryavaran Bhawan,
Jorbagh Road, New Delhi – 110 003

: For Kind information, please.

3. Superintending Engineer,

Paschimanchal Vidyut Vitran Nigam Ltd.,
District Rampur- 250001

To dis-connect the power supply for industrial operations. However, power supply for domestic and security purposes to continue

4. Regional Director

Regional Directorate
Central Pollution Control Board
PICUP Bhawan, Ground Floor,
Vibhuti Khand, Gomti Nagar,
Lucknow – 226 010

: For follow up and ensuring compliance

5. The In-charge, IT Division, CPCB

6. Master file/Guard file WQM II, CPCB Delhi


(PRASHANT GARGAVA)

MEMBER SECRETARY