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## उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड

UTTAR PRADESH POLLUTION CONTROL BOARD

टी.सी.-12 वी., विभूति खण्ड, गोमती नगर, लखनऊ-226010

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पत्र संख्या-जी-29940/08/ड्राफ्ट नोटिफिकेशन/2019

दिनांक-15.04.2019

### ड्राफ्ट कार्यालय ज्ञाप

उ0प्र0 में नदियों की जलगुणता, भूगर्भीय जल प्रदूषण के नियंत्रण एवं स्वच्छ पर्यावरण हेतु आसवनी, टैनरी, पेपर एवं पशुवधशालाओं द्वारा नदियों/ड्रेन/सतही जल निकायों में शून्य उत्प्रवाह निस्तारण सुनिश्चित करने हेतु दिनांक-05.03.2019 को आहूत बोर्ड की 103वीं बैठक में कड़े मानक निर्धारण के लिए अनुमोदन प्राप्त हुआ है। इसके अनुक्रम में जल प्रदूषण (निवारण एवं नियंत्रण) अधिनियम, 1974 एवं पर्यावरण संरक्षण अधिनियम, 1986 की धारा 3 (2) के अंतर्गत बोर्ड को प्रदत्त शक्तियों के अनुपालन में आसवनी, टैनरी, पेपर एवं पशुवधशालाओं हेतु शून्य उत्प्रवाह निस्तारण के कड़े मानक निर्धारित किए जाने संबंधी ड्राफ्ट बोर्ड की वेबसाइट [www.uppcb.com](http://www.uppcb.com) पर उपलब्ध है। सभी संबंधित से अपेक्षा की जाती है कि उक्त 'ड्राफ्ट कार्यालय ज्ञाप' के संबंध में अपनी आपत्ति/सुझाव विज्ञापन प्रकाशन के एक माह के भीतर बोर्ड में लिखित/ई-मेल द्वारा भेज सकते हैं। उक्त अवधि में प्राप्त आपत्ति/सुझाव पर विचार के उपरांत कार्यालय ज्ञाप को अंतिम रूप दे दिया जाएगा।

सदस्य सचिव



## उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड

UTTAR PRADESH POLLUTION CONTROL BOARD

टी.सी.-12 वी., विभूति खण्ड, गोमती नगर, लखनऊ

पत्र संख्या-जी-29940/08/ड्राफ्ट नोटिफिकेशन/2019

दिनांक-15.04.2019

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सदस्य सचिव

R-G 29943

U.P. Pollution Control Board  
T.C.-12V. Vibhuti Khand , Gomtinagar, Lucknow.

No. G-29940/08/draft notification/2019

Dated 15-04-2019

Draft Office Memorandum

It is hereby notified for general information and for information for all person affected thereby that in order to provide clean environment, clean water quality of rivers, affective control of ground water pollution in the state there is urgent need for affective management of industrial effluent generated from grossly polluting industries so that Zero effluent discharge in rivers/drains/surface water bodies is ensured. There is urgent need to adopt stringent standard of Zero liquid discharge (ZLD) in distillery (Yeast manufacturing unit included), Tannery, Paper and slaughter house, in order to safeguard the receipt water body quality.

In exercise of powers under section 17 of Water (prevention and control of Pollution) Act, 1974, and under section 3(2) of Environmental (Protection) Act 1986 the following proposal regarding stringent standards of ZLD in distillery (Yeast manufacturing unit included), Tannery, Paper and slaughter house has been approved in Boards 103rd meeting dated 05.3.2019 :-

**1. Distillery sector**

**1.(a)** All new molasses based distilleries including yeast manufacturing units/increase in production in existing molasses based distilleries including yeast manufacturing units shall achieve zero liquid discharge (ZLD) by;

- I. Concentrating and incinerating the spent wash. Raw / Bio-methanated spent wash to be concentrated by MEE and / or RO (minimum 45-60 % solids) and incinerated in boiler.
- II. Concentrating and utilising the spent wash in bio-composting with press mud shall not be allowed.

**1.(b)** All existing molasses based distilleries including yeast manufacturing units shall achieve zero liquid discharge (ZLD) only through;

- I. Concentrating and incinerating the spent wash.
- II. Raw /Bio-methanated spent wash to be concentrated by MEE and / or RO (minimum 45-60 % solids) and incinerated in boiler.
- III. Concentrating and utilising the spent wash in bio-composting with press mud shall be phased out within 01 year from the date of office memorandum.

## **2. Tannery Sector**

### **2.1 Stand alone chrome tannery sector**

**2.1(a)** All new stand alone chrome tanned tanneries / increase in production in existing chrome tanned tanneries shall achieve zero liquid discharge (ZLD) by;

- I. Industry should adopt cleaner technology for reduction of effluent and chemical consumption.
- II. Soak liquor stream, chrome liquor stream and other stream should be segregated. Soak liquor should be evaporated through thermal/solar evaporation to recover salt.
- III. Chrome liquor stream should be treated through Chrome Recovery Plant and recovered chrome liquor should be recycled in the process.
- IV. Other process effluent should be subjected to Chemical precipitation, activate sludge process based treatment and tertiary treatment followed by RO plant followed by Nano filtration. Reject from RO/Nano filtration should be concentrated through Multi Effect Evaporators (MEE) and concentrated MEE reject should be sent to TSDF. RO/Nano filtration permeate and MEE condensate should be recycled in the process.

**2.1(b)** All existing stand alone chrome tanned tanneries shall achieve zero liquid discharge (ZLD) by adoption of above measures at 2.1(a) within 01 year from the date of office memorandum.

### **2.2 Stand alone vegetable tannery sector**

**2.2(a)** All new vegetable tanned tanneries / increase in production in existing vegetable tanned tanneries shall achieve zero liquid discharge (ZLD) by;

- I. Industry should adopt cleaner technology for reduction of effluent and chemical consumption.
- II. Soak liquor stream, chrome liquor stream and other stream should be segregated. Soak liquor should be evaporated through thermal/solar evaporation to recover salt.
- III. Other process effluent should be subjected to Chemical precipitation, activate sludge process based treatment and tertiary treatment followed by RO plant followed by Nano filtration. Reject from RO/Nano filtration should be concentrated through Multi Effect Evaporators (MEE) and concentrated MEE

reject should be sent to TSDF. RO/Nano filtration permeate and MEE condensate should be recycled in the process.

**2.2(b)** All existing stand alone vegetable tanned tanneries shall achieve zero liquid discharge (ZLD) by adoption of above measures at 2.2(a) within 01 year from the date of office memorandum.

### **2.3 Tannery sector (In cluster)**

**2.3(a)** All new chrome tanned tanneries / increase in production in existing chrome tanned tanneries, in cluster, shall achieve zero liquid discharge (ZLD) by;

- I. Individual Industry should adopt cleaner technology for reduction of effluent and chemical consumption.
- II. Soak liquor stream, chrome liquor stream and other stream should be segregated. Soak liquor should be send to CETP for evaporation through common thermal evaporation to recover salt and send back to member units for reuse.
- III. Chrome liquor stream should be send to CCRP for treatment through Common Chrome Recovery Plant and recovered chrome liquor should be recycled in the process by member units.
- IV. Other process effluent should be send to CETP after filtration and at CETP the combined effluent after equalisation should be subjected to Chemical precipitation, for reduction of TDS, activate sludge process based treatment and tertiary treatment followed by RO plant and Nano filtration. Reject from RO/Nano filtration should be concentrated through Multi Effect Evaporators (MEE) and concentrated MEE reject should be sent to TSDF. RO/Nano filtration permeate and MEE condensate should be recycled in the member units.
- V. New cluster of tanneries should develop TSDF facility for safe disposal of reject within the industrial area.
- VI. All the tannery units member of CETP, shall upgrade the Primary Effluent Treatment Plant (PETP) by installing units such as Bar Screen, Collection Tank cum equalization tank, Pumping System, Lime and alum dosing system, Flash mixer, Flocculation tank, Primary settling tank, Sludge Dewatering System, Flow measuring devices of suitable capacity.

**2.3(b)** All existing chrome tanned tanneries, in cluster shall modify/upgrade Primary Effluent Treatment Plant (PETP) by installing units such as Bar Screen, Collection Tank cum equalization tank, Pumping System, Lime and alum dosing system, Flash mixer, Flocculation tank, Primary settling tank, Sludge Dewatering System, Flow measuring devices of suitable capacity and shall also achieve zero liquid discharge (ZLD) by adoption of measures at 2.3(a) I,II,III and (IV as below) within 01 year from the date of office memorandum:-

IV. Other process effluent should be send to CETP after filtration and at CETP the combined effluent after equalisation should be subjected to Chemical precipitation, for reduction of TDS, activate sludge process based treatment and tertiary treatment followed by RO plant and Nano filtration. Reject from RO/Nano filtration should be diluted with STP treated effluent and discharge for irrigation as per prescribed standards. RO/Nano filtration permeate should be recycled to the member units.

### 3. Paper Sector

**3.(a)(1)** All new Agro based paper industries/increase in production in existing Agro based paper industries units shall achieve zero black liquor discharge by adopting following Chemical recovery facilities:-

<b>1. For Kraft Pulping Paper Industries</b>			
1. 1	Black Liquor Evaporation	Multiple-effect, falling film evaporation plants (with surface condensers) capable of concentrating black liquor to a concentration not less than 65%. Foul condensate stripping & stripped gas capture/disposal	
1. 2	Black Liquor Combustion	High pressure recovery boiler, directly fired at 65-75% bls dryness without any secondary direct-contact evaporation, a 3 or 4-level combustion air distribution arrangement and adequately sized Electrostatic Precipitator (ESP).	
1. 3	Causticising Plant	Causticising plant comprising green liquor normalisation, green liquor clarification, dregs washing/filtration, drum/stationary slaker, single or 2-stage causticising, white liquor clarification and lime mud washing followed by efficient pre-coat lime mud filtration. White liquor clarification/mud washing can be through sedimentation type clarifiers/washers or pressurised disk filters or a combination of the two. Dust extraction and scrubbing systems.	
1. 4	Lime Mud Re- burning	Rotary Lime Kiln with Electrostatic Precipitator. Dust extraction and scrubbing systems at Feed and Discharge- ends of the Kiln, and transfer points of conveying systems.	
1. 5	Spillage Monitoring & Control	Spill pits/tanks, and drainage system for containment / recovery, with conductivity-based alarm annunciation for spill notification.	
<b>2. For Soda Pulping Paper Industries</b>			
2. 1	Black Liquor Evaporation	Pulp mills >200 TPD brown pulp	Multiple-effect evaporation plants (with surface condensers) capable of concentrating black liquor to a concentration not less than
		Pulp mills <200 TPD brown pulp	Multiple-effect evaporation plants (with surface condensers) capable of concentrating black liquor to the desired concentration, preferably not less than 25%

2. 2.	Black Liquor Combustion	Pulp mills >200 TPD brown pulp	High pressure recovery boiler, directly fired at 65-70% bls dryness without any secondary direct-contact evaporation, a 3 or 4-level combustion air distribution arrangement and adequately sized Electrostatic Precipitator (ESP).
		Pulp mills <200 TPD brown pulp	Unconventional, low-temperature, fluidised-bed black liquor processing systems ensuring complete combustion of black liquor and producing saleable sodium carbonate (soda ash) pellets.
2. 3.	Causticising Plant	Pulp mills >200 TPD brown pulp	Causticising plant comprising green liquor normalisation, green liquor clarification, dregs washing/filtration, drum/stationary slaker, 2-stage causticising, white liquor clarification and lime mud washing followed by efficient pre-coat lime mud filtration. White liquor clarification/mud washing can be performed through sedimentation type clarifiers/washers or pressurised disk filters or a combination of the two. Dust extraction and scrubbing systems
		Pulp mills <200 TPD brown pulp using unconventional recovery system (FBR technology)	No causticising required as long as all the sodium carbonate produced is sold and not used as landfill. Mills shall have to install a Causticising Plant in event that the product does not find a ready market and constitutes a solid waste.
2. 4.	Lime Mud Re- burning	Pulp mills >200 TPD brown pulp	Rotary Lime Kiln with Electrostatic Precipitator or alternate system duly approved by CPCB. Dust extraction and scrubbing systems at Feed and Discharge-ends of the Kiln, and transfer points of conveying systems.
		Pulp mills <200 TPD brown pulp using unconventional recovery system (FBR technology)	No Lime Kiln is required as long as all the sodium carbonate produced is sold and not used as landfill. Mills shall undertake to install a Lime Kiln or alternate system duly approved by CPCB (in addition to a causticising plant) in event that the product does not find a ready market and constitutes a solid waste.

2.5	Spillage Monitoring & Control	Spill pits/tanks, and drainage system for containment/ recovery, with conductivity-based alarm annunciation for spill notification.
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**3.(a)(2)** The industrial effluent will be recycled back into the process by installing R.O plant of suitable capacity and R.O reject will be disposed either by using it with the raw material or through TSDF. The new Agro waste based unit will not be allowed to discharge any industrial effluent outside the factory premises.

**3.(b)** All new wastepaper based paper manufacturing units shall install their E.T.P to achieve zero discharge outside the factory premises either by installing R.O plant of suitable capacity or any other suitable technology or by using the treated effluent back into the process.

**3.(c) Existing Paper Manufacturing Units**

- I. All existing Agro based paper manufacturing units shall only operate after installing above mentioned Black liquor disposal facility.
- II. The industrial effluent will be recycled back into the process by installing R.O plant of suitable capacity and R.O reject will be disposed either by using it with the raw material or through TSDF. The Agro waste based unit will not be allowed to discharge any industrial effluent outside the factory premises. Above mentioned upgradation and ZLD must be completed and commissioned with one year.
- III. All existing wastepaper based paper manufacturing units shall upgrade /modify their E.T.P to achieve zero discharge outside the factory premises either by installing R.O plant of suitable capacity or any other suitable technology or by using the treated effluent back into the process within one years.

#### **4. Slaughter Houses**

**4.(1)** New and expansion in Slaughter Houses to be allowed with Zero Liquid Discharge outside the factory premises by adopting following :-

**4.1(a)** Utilization of Treated Effluent back into the process.

**4.1(b)** Installation of Micro Filtration System like RO followed by Evaporation of RO rejects and recycling of RO permeate.

**4.(2)** Existing Slaughter Houses to switch over to ZLD within 01 year from the date of issue of office memorandum either by:

**4.2(a)** Utilization of Treated Effluent back into the process.

**4.2(b)** Installation of Micro Filtration System like RO followed by Evaporation of RO reject and recycling of RO permeate.

All stack holders including Public/Private organizations and concerned citizens are requested to send the comments/suggestions/views on the Draft Notification regarding above stringent standards of ZLD in distillery (Yeast manufacturing unit included), Tannery, Paper and slaughter house within one month from the date of publication of this Draft Notification. The comments should be sent either through e-mail on [draftzld@uppcb.com](mailto:draftzld@uppcb.com) or through post at the official address mentioned above. The comments received beyond the deadline will not be considered.

Member Secretary.