INSPECTION REPORT OF M/S SARAYA DISTILLERY, SARDAR NAGAR, GORAKHPUR (UP)

In compliance of Hon'ble NGT order dated 19.01.2015 in the matter of Original Application no. 208 of 2014 of item no. 12, inspection of M/s Saraya Distillery, Sardar Nagar, Gorakhpur was carried out jointly by officials of CPCB, Z.O, Lucknow and UPPCB, Regional Office, Gorakhpur on dt. 17.04.2015. During inspection, unit was found in operation. Sailent details, observations and recommendations regarding the unit are as given below:

A: General Information	
Name of the unit and Address	M/s Saraya Distillery Sardar Nagar, Gorakhpur(UP)-273202
Name of the Proprietor/ Contact person – Designation Contact No.	Mr. Gurmukh Singh, General Manager-Country Liquor 9935596234
Year of Commissioning.	1951
Sector	Private
Production capacity • Products • Installed Production Capacity • Present Production	RS(Rectified Spirit)/ENA(Extra Neutral Alcohol) 110 KLD 110 KLD (as reported)
Raw materials & their requirement	Molasses, Yeast, Nutrient & Chemicals etc.
B: Water Pollution and its Control:	
Water Supply Source Water Consumption (KLD) ➢ Industrial ➢ Domestic	Tube Well Approx. 430.37 KLD {avg. for April,2015(upto 16.04.2015)} Approx 12 KLD
Waste Water Generation (KLD) ➢ Industrial ➢ Domestic	Approx 1100 KLD(spent wash) -on full production Approx 10 KLD
Waste water treated (KLD) ➢ Industrial ➢ Domestic	Approx 1100 KLD (spent wash) -on full production Approx 10 KLD

Details of ETP ➢ ETP Description with flow diagram	Buffer Tank (01No.), Anerobic-digester (02No), Lamela Candle filter (02No.) Gas holder (02No.), Gas Flaring Tower (01No.) Reverse Osmosis plant and Bio-composting
➢ Details of RO, if any	Clarifier-I with buffer tank, Bio-reactor coarse bubble diffusers with piping accessories, Clarification feed pump skid(Part of Industrial Filter WTP), Aeration system blower, Bag filter skid, UF Skid, Polymer dosing system, UF back wash pump with dosing system attached with CIP unit with tank, De-gasser with blower, Clarifier-II with buffer tank.
➢ Details of Multi Effect Evaporator, if any	Multi effect evaporator not installed
Mode of disposal of treated effluent	Spent wash generated from the process is used for bio-composting after anaerobic digestion and reverse osmosis. Effluent generated from floor washing, spent lees, bottling section effluent etc. are sent to Water Treatment Plant (WTP).Treated effluent from WTP is used for gardening.
Flow measuring device installed at outlet of ETP	Flow measuring device was installed for the measurement of spent wash generated from process .However, no flow meter is installed for measuring the effluent generated from floor washing, spent lees, Bottling etc.
Status of Consent under the Water Act- 1974	Not available, while permission for operation of plant was given till date of inspection.
b (I) Information regarding Bio-composting	
Active area for bio compost preparation	29 Acre
Area for press mud storage	04 Acre
Area for bio compost storage	02 Acre
Spent wash storage capacity	78000 m^3 (RO reject storage lagoon), 10,200 m^3(Fermentor wash sludge lagoon), 12200 m^3(Bio-methanated spent wash settling tank),which is equivalent to the 223 days of spent wash storage capacity(on full production.)
Availability of press mud	From nearby sugar mill
Quantity of compost prepared	5474.0 MT(April,2014 to March,2015)
Quantity of press mud procured	21093.92 MT(January ,2015 to March,2015)
Details of wind roses (Number, length, height, width of stacking, space between two wind rose)	No. / Length (in mtrs.) / Height(m) / Width of Stacking(m) / Space between two rows(m) 48 / 500-668 / 1.5 / 3.5 / 2.5
Quantity of Effluent being used for composting (m^3/day) :	225 m^3/day to 450 m^3/day
Quantity of press mud being used for one cycle	4000 MT to 5000 MT
Maturity time in days for one cycle	45 days
Arrangement for rainy season	HDPE sheet arrangement
B (II) Information regarding Ferti-irrigation	

Details of treatment of spent wash (details of bio methanisation, primary and secondary treatment)	Not Applicable
Command area for irrigation (available land area)	Not Applicable
System for dilution of treated effluent required for ferti-irrigation	Not Applicable
System of transportation of treated effluent upto field.	Not Applicable
Formal agreements with farmers for using treated effluent	Not Applicable
Storage facility available for treated effluent during low demand period	Not Applicable
Quality of effluent being used for ferti-irrigation	Not Applicable
Ground water monitoring network	Not Applicable
C: Air Pollution and its Control	
Sources of Air Pollution	Boiler-22 TPH
➢ Type of Fuel used with consumption ➢ Stack details with APCS	Rice Husk-75 ton/day & Bio gas- 40000 Nm^3/day at 100% Production Capacity utilization as reported by unit. Stack height-30 mtr;Dia.1350 mm, APCS - Multi Cyclone
Status of Consent under the Air Act- 1981	Not available, while permission for operation of plant was given till date of inspection.
D: Waste Management	
Type & Quantity of Waste Generated	Fermentation sludge- 1.5 % of total prepared wash Boiler ash- approx. 10.5 Ton/day
Facility of Storage/ Disposal	Fermentation sludge is used in bio-compost & Boiler ash is used for land filling.
Disposal of waste	Same as above

Observations:

1. The unit is engaged in the production of Rectified Spirit (RS) and Extra Neutral Alcohol (ENA) having installed capacity of 110 KLD (02 distillation unit capacity 55 KLD each) using molasses as main raw material. During inspection, unit was in operation with the present production of 110 KLD. The distillation system of one unit is based on partial pressure without reboiler and another unit is based on multi-pressure distillation with reboiler.

2. In compliance of Hon'ble NGT order dated 19.01.2015, the unit has closed its distillation process on dated 23.01.2015.The unit has submitted application to UPPCB for conducting joint inspection on dated 06.02.2015 and 10.02.2015 in compliance of Hon'ble NGT order "once unit complies with all the conditions and becomes complying and non-polluting ,the unit will apply to the Board which then shall conduct joint inspection with CPCB and before granting and /or renewing the consent, the inspection report shall be taken into consideration" .UPPCB granted permission for operation of the unit on 19.03.2015 till the inspection carried out. Further, unit has started distillation process on dated 20.03.2015.
3. The unit is meeting its fresh water requirement from ground water using 02 nos. of tube wells. Water meter is installed on common head/pipe of tube wells.
4. The unit is presently generating 1100 KLD (approx. 10 KL/KL of RS production) of spent wash. The unit has installed following system for the management/treatment of spent wash:
    - Spent wash received from distillation plant (temp. 85 deg C) is collected in Buffer Tank (12.7mX39.6mx3m) to reduce temp. of spent wash upto 70 deg. C. Flow meter was installed for measurement of spent wash generation. The spent wash is then passed through Pre Heat Exchanger and fed to Anaerobic-digesters (02 nos. with size Height-20 m, dia.-29m and Height-21.39m, dia.-30 m) for reduction of BOD and COD.
    - Sample was collected from inlet and outlet of Anaerobic-digesters to assess the performance. Analysis results are presented below:

Sample Location	Parameters				
	pH	SS (mg/l)	Total Solid(mg/l)	BOD (mg/l)	COD (mg/l)
Inlet of Anaerobic digester	4.76	6730	134604	46084	116211
Outlet of Anaerobic digester-1	7.68	35818	68757	13988	65656
Outlet of Anaerobic digester-2	7.70	6308	55457	11997	47188
% Reduction	--	--	--	**69.64 & 73.96**	**43.50 & 59.39**

As per the design criteria submitted by unit, the avg. reduction of BOD and COD in the Anaerobic Digester should be 90% and 70% respectively. As per the analysis results, the reduction in BOD and COD both is not achieved by the Digesters optimally.

- Gas generated from the Anaerobic Digesters is collected in gas holder and used as fuel in boiler or flare to atmosphere. The overflow of effluent from Anaerobic Digesters is fed to degasifier and then Lamela Clarifier for sludge settling. Part of the sludge is recycled in the Anaerobic Digesters and remaining is used for bio-composting after settling.
- Bio-methanated spent wash is collected into a tank of capacity 12200 m^3 for the sludge settling. The treated effluent/spent wash is then fed to Reverse Osmosis (RO) Plant for volume reduction of treated spent wash with reported installed capacity of 1200 m^3/day. The average separation of spent wash is 50% reject and 50% permeate. Permeate is being used as make up water in cooling tower and as boiler feed water after treatment through DM plant.
- Sample was collected from Feed to RO plant, RO Reject and RO Permeate. Analysis results are presented below:

Sample Location	Parameters				
	pH	SS (mg/l)	Total Solid(mg/l)	BOD (mg/l)	COD (mg/l)
RO Feed	8.20	3727	49732	10716	44486
RO Reject	8.18	3710	57216	9367	57995
Design parameters of RO reject	**7.0-8.0**	**>2500**	**---**	**>8000**	**>80000**
RO Permeate	8.39	71	1498	192	459
Design parameters of RO permeate	**6.0-8.0**	**<1**	**--**	**<15**	**<100**

- It is evident from the results that RO permeate is not meeting with the design parameters with respect of pH, BOD & COD. Similarly, RO reject is not meeting with the design parameter for pH only.
- RO reject (50%) is conveyed through open drain to Lagoon (78,000 m^3), where from it is used for bio-composting using press mud as filler material.

- The unit has approx. 35 acres of land for the bio-composting. As reported, the unit has provided 29 acres for active bio-composting, 04 acres for press mud storage and 02 acres for prepared-bio-compost storage.

5. The unit has lagoon having capacity 10,200 m^3, which was previously being used for storage of Fermentor wash sludge. During inspection, lagoon was not being used by the unit, while coloured effluent was still stored in the lagoon.
6. Earlier, unit had 14 batch fermentor(outside cooling).At the time of inspection, it was found that four(04) fermentor have been removed and outside cooling system in remaining 10 (ten) fermentors also has been removed and installed PHE for fermentor cooling. During inspection many fermentors were found damaged and repairing work of fermentors was in process.
7. Effluent generated from fermentor cleaning is collected in the hopper bottom settling tank for sludge settling. Supernatant from hopper bottom tank is reused in distillation unit and sludge is used in bio-composting.
8. Spent lees generated are partially reused for molasses dilution (as reported).
9. Gland leakages are collected in a sump and reused in distillation unit (as reported).
10. Boiler blow down, DM plant regenerate is used for the ash quenching (as reported).
11. Effluent generated from floor washing, cooling tower overflow, ISP lees, softner plant backwash etc., which has quantity of approx. 73 KLD, is sent to Water Treatment Plant (WTP).Water Treatment Plant comprises of plain sedimentation tank, Aeration Tank having diffuser for aeration and final plain sedimentation tank. Treated effluent from WTP is used for the gardening (as reported). WTP plant installed by the unit does not seems adequate for the treatment. Sample was collected from inlet and outlet of WTP. Analysis results are presented below:

Sampling locations	Parameter			
	pH	SS (mg/l)	BOD (mg/l)	COD (mg/l)
Inlet of WTP	6.39	46	608	770
Outlet of WTP	6.95	137	500	642
Standards as per SO 64(E) dated 18.01.1988 & GSR 176(E) dated 02.04.1996	5.5-9.0	100	30	---

12. It is evident from the results that unit is discharging polluted effluent on land.
13. During inspection, it was found that whole area was being used for bio-composting and 48 windrows were in process. The unit has not provided proper specified area for the storage of prepared bio-compost. As reported, prepared bio-compost is sold to local farmers.
14. The unit has installed three hand pumps in the bio-compost yard near the bio-compost area, which is not adequate as per the protocol of bio-composting.
15. The unit has only one Aerotreller, 02 JCB and 06 tanker for spraying of RO reject on windrows. Equipments are not sufficient in comparison to effluent generated from the unit at full production capacity.
16. At the time of inspection,it was observed that drain carrying effluent generated from fermentor leakages and cooling was temporarily closed by the unit.
17. The unit has a bypass drain on the back side of unit, which travels through nearby village and ultimately meets to Vaisi nalla. As reported by the unit, drain is used for discharging of domestic effluent. During inspection, bypass drain leading to nearby village was found temporary closed and effluent/sewage was being sent to soak pit.
18. The unit has one another bypass drain, which was also found temporary closed and this drain was found dry. It seems that this drain may be used for bypassing the effluent generated from floor washing, spent lees etc..
19. The drain is used for discharge of effluent such as floor wash, spent lees
20. At the time of inspection industry representative told that before the notification of Water (Prevention & Control of Pollution) Act, 1974, practice of spent wash storage in Kacha Lagoon was being adopted by the industry. At the time of inspection, it was found that few Lagoons were found dismantled and remaining still exist. During inspection, it was observed that coloured polluted water was coming out as seepage from the ground on that bank of the Vaisi Drain where lagoons were situated and coloured water was meeting with the water of Vaisi Drain. Thus, deteriorating the water quality of Vaisi Drain and ultimately the water quality of River Gurra & Rapti. Samples from Vaisi Drain were collected after mixing of percolated/leached water near culvert and near bio-compost yard. Analysis results are presented below:

Sampling locations	Parameter				
	pH	Colour (Hazen)	SS (mg/l)	BOD (mg/l)	COD (mg/l)
Vaisi drain after mixing of percolated/leached water at culvert	7.54	250	13.3	2.71	48.2
Vaisi drain near Bio-compost yard	7.52	350	27	17.3	76.1

21. It is evident from the results that percolated/leached coloured water which is coming out from the ground is polluting in nature and it is deteriorating the water quality of Vaisi Drain. Possibility of Ground water contamination due to the past storage of spent wash in kachcha lagoons may not be ruled out. As informed, the unit is in process of assessing the ground water contamination by NIH, Roorkee.
22. The unit has 02 DG sets (1000 KVA & 750 KVA), which are not equipped with acoustic enclosure and not having proper stack height.
23. The unit has one boiler with capacity 22 TPH. Bio-gas and rice husk is used as fuel in boiler. Monitoring of Stack was carried out. Analysis results are presented below:

S. No.	Sampling Location	Parameters
		Particulate Matter (mg/Nm^3)
01.	Boiler (22 TPH)	126.5
Standard as per GSR 176(E),Dated April 02,1996		150

It is evident from the results that unit is meeting with the stipulated norms of emissions from boilers.

Recommendations:

1. The unit should provide acoustic enclosure in DG sets and should raise the height of stack as per norms before resuming production.
2. The unit should dismantle the drain located on the back of the unit and passing through the nearby village before resuming production.
3. The unit should make separate drains for storm water and industrial effluent within the premises of the unit before resuming production.

4. The unit should make collection sump at the end of the industrial drain within the premises of the unit and install a transfer pump for pumping the effluent from sump to Water Treatment Plant before resuming production.
5. The unit should upgrade its existing Water Treatment Plant (WTP) in such a manner that treated effluent from Water Treatment Plant should achieve the norms as stipulated by the Board before resuming production.
6. The unit should arrange sufficient equipments required for bio-composting for treatment of effluent generated from 100 percent capacity utilization before resuming production.
7. The unit should make proper arrangement for storage of finished bio-compost at 100 percent capacity utilization before resuming production.
8. The unit should make arrangement for proper monitoring of underground water quality near bio-compost yard.
9. The unit should ensure the 100 percent compliance of the protocol of bio-composting before resuming production.
10. The unit should submit the time bound action plan regarding the compliance of directions issued by SPCB/CPCB to ensure zero liquid discharge before resuming production.
11. The unit should install online monitoring systems within the stipulated time period as mentioned in the direction issued by UPPCB/CPCB.
12. The unit should engage the recognized authority for study of ground water pollution at the earliest and should submit the time bound action plan regarding corrective measures to be taken for improving the ground water quality as suggested by the authority, if found adversely affected in the study.
13. The unit should maintain proper log book of fresh water consumption, water recirculation, spent wash generation, effluent generated from other processes, operation of WTP, bio-gas production, bio-gas utilization, RO reject generation, RO permeate generation, bio-compost production, bio-compost sold, ground water analysis, solid waste generation and solid waste disposal/reuse. The unit should install suitable measuring devices at all required points before resuming production.
14. The unit should properly dispose-off the ash generated from the boiler.
15. The unit should properly & regularly operate the anaerobic digesters, RO plant and Water Treatment Plant and should also ensure the regular as well as proper maintenance of the above said pollution abatement devices.

16. The unit should obtain permission from Central Ground Water Authority for ground water abstraction.

Inspection Team:

1. Sh. S.B. Singh, Environmental Engineer and Regional Officer, UPPCB, Gorakhpur
2. Sh. Runa Oraon, Sc. 'C',CPCB, Z.O, Lucknow

25.05.2015

25/05/20

पिकप भवन , विभूति खण्ड, गोमती नगर, लखनऊ
फोन : 0522 : 4087600
फैक्स : 0522 : 4087602

PICUP Bhawan, Vibhuti Khand, Gomtinagar, Lucknow
Phone : 0522- 4087600
Fax : 0522 - 4087602

TEST REPORT: WASTEWATER LABORATORY

S.No.W/2015/64

	Date of test report: 23/4/2015	Date/period of testing:18-22/4/2015
1	परियोजना /Project/ Test Programme	M/s Saraya Distillery
2	नमूने का स्रोत /भूजल /सरिता /अन्य/Sample Source (GW/river/other)	Industrial
3	नमूना का प्रकार /ग्रैब/कम्पोजिट इंटीग्रेटेड/ Type of Sample (Grab/ Composite/ Integrated)	Grab
4	नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by	Sh. Runa Oraon
5	नमूना एकत्रीकरण की तिथि/Date of Sample collection	17/4/2015
6	प्रयोगशाला में नमूना प्राप्ति की तिथि/Date of sample receipt in laboratory	18/4/2015
7	नमूना एकत्रण पद्धति/Sampling procedure	Please Refer CB.ZLN.SOP.5.2.2 & CB.ZLN.QR.5.7.1 Issue No: 1
8	विश्लेषण हेतु आवेदनकर्ता/Analysis indented by	Sh. Runa Oraon

क्र.सं. S. No.	पेरामीटर Parameter	इकाई Unit	नमूनों का विवरण/कोड इत्यादि Description of sample/Code etc.							
			A	B	C	D	E	F	G	H
1	पी एच/ pH		4.76 (27.1°C)	7.68 (27.2°C)	7.70 (27.0°C)	8.20 (27.2°C)	8.18 (27.3°C)	8.39 (27.3°C)	6.39 (27.3°C)	6.95 (27.4°C)
2	तापमान/ Temperature	डि.°C	---	---	---	---	---	---	---	---
3	गंदलापन / Turbidity	एन.टी.यू. NTU	---	---	---	---	---	---	---	---
4	रंग/ Colour	हेजन यूनिट	---	---	---	---	---	---	---	---
5	चालकता/ Conductivity	माइक्रो सीमेन्स/सेमी	---	---	---	---	---	---	---	---
6	एस.एस./ SS.	मिलीग्राम/ली. mg/L	6730.0	35818.0	6308.0	3727.0	3710.0	71.0	46.0	137
7	टी.एस./ TS	do	134604.0	68757.0	55475.0	49732.0	57216.0	1498.0	---	---
8	बी.ओ.डी. / BOD	do	46084.0	13988.0	11997.0	10716.0	9367.0	102.0	608.0	500
9	सी.ओ.डी. / COD	do	116211.0	65656.0	47188.0	44486.0	57995.0	469.0	770.0	642

संलग्नक/ Refer अनु पृ.क्र./Test methods followed are appended overleaf

CODE	Description
A	Feed to Bio-digester.
B	Bio-digester-1 Outlet.
C	Bio-digester-2 Outlet.
D	RO Feed.
E	RO Reject.
F	RO Permeate
G	Inlet of WTP.
H	Outlet of WTP.

End of Test Report

23/4/2015

आख्या बनाने वाले के हस्ताक्षर/ Prepared by (Name & Sign)..... अधिकृत हस्ताक्षरकर्ता/ Auth. Signatory

Note : 1. The results in the Test Report relate only to the items tested. 2. The report shall not be reproduced except in full, without the written permission of Laboratory.

पिकप भवन , विभूति खण्ड, गोमती नगर, लखनऊ
फोन : 0522 : 4087600
फैक्स : 0522 : 4087602

PICUP Bhawan, Vibhuti Khand, Gomtinagar, Lucknow
Phone : 0522- 4087600
Fax : 0522 - 4087602

S.No...F/2015/34

TEST REPORT: FRESH WATER LABORATORY

	Date of test report: 23/4/2015	Date/period of testing:18-21/4/2015
1	परियोजना /Project/Test Programme	Vaisi Nalla
2	नमूने का स्रोत /भूजल /सरिता /अन्य/Sample Source (GW/river/other)	Nalla
3	नमूना का प्रकार /ग्रेब/कम्पोजिट/इंटीग्रेटेड/Type of Sample (Grab/Composite/ Integrated)	Grab
4	नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by	Sh. Runa Oraon
5	नमूना एकत्रीकरण की तिथि/Date of Sample collection	17/4/2015
6	प्रयोगशाला में नमूना प्राप्ति की तिथि/Date of sample receipt in laboratory	18/4/2015
7	नमूना एकत्रण पद्धति/Sampling procedure	Please Refer CB/ZLN/SOP/5.7/Q-06/No. 0
8	विश्लेषण हेतु आवेदनकर्ता/ Analysis indented by	Sh. Runa Oraon

क्रम सं. S. No.	पैरामीटर Parameter	इकाई Unit	नमूनों का विवरण/कोड इत्यादि Description of sample/Code etc.					
			I	J				
1	पी एच/ pH		7.52 (29.3 °C)	7.54 (29.2 °C)				
2	तापमान/ Temperature	°C, °C	---	---				
3	टर्बिडिटी /Turbidity	एन.टी.यू, NTU	---	---				
4	रंग/ Colour	हेजन, Hazen	350.0	250.0				
5	चालकता/ Conductivity	माइक्रोमोज/से.मी. µS/cm	---	---				
6	एस.एस./ SS.	मि.ग्रा/लि. mg/l	27.0	13.3				
7	बी.ओ.डी. BOD	-do-	17.3	2.71				
8	सी.ओ.डी. /COD	-do-	76.1	48.2				

विश्लेषण विधि हेतु ई.पी.ए./Test methods followed are appended overleaf

CODE	Description
I	Downstream of Vaisi Nalla.
J	Upstream of Vaisi Nalla.

End of Test Report

अनुरक्षण प्रभारी के हस्ताक्षर/ Prepared by (Name & Sign).....

अधिकृत हस्ताक्षरकर्ता/ Auth. Signatory .....

वै० के० सचान
वैज्ञानिक 'सी'

पिकप भवन, विभूति खण्ड, गोमती नगर, लखनऊ
फोन : 0522 : 4087600 फैक्स : 0522 : 4087602

PICUP Bhawan,Vibhuti kahand, Gomtinagar, Lucknow
Phone : 0522- 4087600 Fax : 0522 - 4087602

S No. S/2015/04

STACK SAMPLE TEST REPORT

Date of test report..01/5/2015

Date/period of testing ..21/4/2015

1. परियोजना/परीक्षा/Project/Test Programme ....M/s Saraya Distillery, Gorakhpur (UP).....
2. नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by ....Sh. C.S. Meena.....
3. नमूना एकत्रीकरण की तिथि/ Date of Sample collection .....17/4/2015.....
4. प्रयोगशाला में नमूना प्राप्ति की तिथि/ Date of sample receipt in laboratory .....20/4/2015.....
5. Sampling plan CB/ZLN/SOP/5.7/2 & CB/ZLN/QR/5.7/1 Issue No. 01 .
6. विश्लेषण हेतु आवेदनकर्ता / Analysis indented by.....Sh. Runa Oraon.....

Parameter	Standard	Result						
		Description of sample / code etc.						
		Sd-1						
Stack height (m)		30.0						
Stack diameter (m)		1.4						
Flue gas temperature(°C)		102.0						
Flue gas velocity (m/s)		15.0						
Particulate Matter* (mg / Nm^3)		126.5						
Sulphur di-oxide(mg /Nm^3)		--						

Further detail of sample location and Test methods followed are appended overleaf

Note : 1. Results relate only to the items tested; 2. The report shall not be reproduced except in full, without the written permission of laboratory. 3. * Value corrected to 0% moisture & 12% CO_2

आख्या बनाने वाले के हस्ताक्षर/ Prepared by(Name & Sign)..... 01/5/2015

अधिकृत हस्ताक्षर कर्ता/ Authorised Signatory....वी.के. सचान
वैज्ञानिक "ग"
01/5/2015

CODE	DESCRIPTION
Sd-1	M/s Saraya Distillery, Gorakhpur (UP)

S.No.	Product/ Material of test	Type of/Specific tests performed	Test Method Specification against which tests are performed	Range of Detection	Accuracy (+%)	.. Standard
1.	*AIR*					
(a)	Ambient	SPM	ISC Method No 501, Page no. 427-439, 3rd Ed. 1989 IS Method No. 5182, (Part-4), 1999; Reaffirmed in Jan. 2005	05 $\mu g/m^3$ & above	5.0%	
		RSPM	IS 5182 (Part 23), 2006	3.5 $\mu g/m^3$ & above	5.0%	
		Sulphur di-Oxide (SO_2)	IS Method No. 5182, (Part-2), 2001	04 $\mu g/m^3$ & above	5.0%	
		Nitrogen di-Oxide (NO_2)	IS Method No. 5182, (Part 6), 2006	06 $\mu g/m^3$ & above	5.0%	
(b)	Source/Stack Emissions	PM	IS Method No. 11255 (Part-1), 1985 Reaffirmed in Sep. 2003	1 mg/Nm^3 & above	5.0%	
		Sulphur di-Oxide (SO_2)	IS Method No. 11255 (Part-2), 1985 Reaffirmed in Sep. 2003	1 mg/Nm^3 & above	2 - 5%	