

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

IN

Original Application No. 530/2023

Anuj Kumar

Applicant

Versus

State of Uttarakhand & Ors.

Respondent(s)

With

Original Application No. 495/2023

Mohd Amjad & Ors.

Applicant(s)

Versus

State of Uttar Pradesh & Ors.

Respondent(s)

With

Original Application No. 369/2024

Monika (Sarpanch)

Applicant

Versus

State of Uttarakhand & Ors.

Respondent(s)

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Filed by: Adv. Saurabh Balwani

On behalf of Central Pollution Control Board

Place: Delhi

Date: 09.05.2025

1739

COMPLIANCE VERIFICATION REPORT

OF

**M/s R.B.N.S LTD. (SUGAR & DISTILLERY UNIT), LAKSAR,
HARIDWAR, UTTARAKHAND**

IN COMPLIANCE TO

HON'BLE NGT ORDER DATED 12.02.2025

IN THE MATTER OF

ANUJ KUMAR v/s STATE OF UTTARAKHAND & ORS.

[OA No. 530/2023]

WITH

**MOHD. AMZAD &ORS. v/s STATE OF UTTAR PRADESH &
ORS.**

[OA No. 495/2023]

WITH

**MONICA (SARPANCH) v/s STATE OF UTTARAKHAND &
ORS.**

[OA No. 369/2024]

DATE OF VISIT: 26th March, 2025

PREPARED BY

CENTRAL POLLUTION CONTROL BOARD, DELHI (CPCB)

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VERIFICATION REPORT IN COMPLIANCE TO HON'BLE NATIONAL GREEN TRIBUNAL (NGT) ORDER DATED 12.02.2025 IN O.A. NO. 530/2023, O.A. NO. 495/2023 & 369/2024 IN THE MATTER OF ANUJ KUMAR V/S STATE OF UTTARAKHAND & ORS., MOHD. AMZAD & ORS. V/S STATE OF UTTAR PRADESH & ORS. AND MONICA (SARPANCH) v/s STATE OF UTTARAKHAND & ORS.

1. SUBJECT MATTER

1.1. Matter:

O.A. NO. 530/2023 in the matter of Anuj Kumar v/s State of Uttarakhand & Ors.

With

O.A. NO. 495/2023 in the matter of Mohd. Amzad & Ors. v/s State of Uttar Pradesh & Ors.

With

O.A. NO. 369/2024 in the matter of Monica (Sarpanch) v/s State of Uttarakhand & Ors.

1.2. Background:

- i. The detailed report of the Joint Committee was filed on 21.11.2023 before Hon'ble NGT in compliance to orders dated 14.8.2023 (in O.A. No.495/2023) and 23.08.2023 (in O.A. No. 530/2023) and thereafter another detailed report of the Joint Committee was filed on 24.01.2024 before Hon'ble NGT in compliance to order dated 22.11.2023 (in O. A No. 495/2023 with O.A. No 530/2023).
- ii. Thereafter, in compliance to Hon'ble NGT order dated 21.03.2024 (in O. A No. 495/2023 with O.A. No 530/2023) Project proponent (PP) submitted point wise reply on 15.04.2024 against the findings (observations/recommendations) of the joint committee reports dated 21.11.2023 & 24.01.2024.
- iii. An order dated 19.04.2024 was passed by Hon'ble NGT wherein it directed following:

“3. Meanwhile, CPCB may ascertain the correctness of the compliance reflected by PP in the response dated 15.04.2024. If need so arises, CPCB can carry out fresh inspection of the unit and submit compliance report at least one week before next date of hearing. UKPCB will also file the report disclosing action taken for past violation against PP.”
- iv. Accordingly, in compliance to Hon'ble NGT order dated 19.04.2024, the CPCB carried out inspection of the project proponent during 24.06.2024 – 25.06.2024 to ascertain the correctness of the compliance reflected by PP in the response dated 15.04.2024, and filed the verification report in Hon'ble NGT on dated 22.07.2024.
- v. Thereafter, in compliance to Hon'ble NGT order dated 21.03.2024 (in O. A No. 495/2023

with O.A. No 530/2023) Project proponent (PP) submitted point wise reply on 04.02.2025 against the findings (observations/recommendations) of the CPCB verification report dated 22.07.2024.

- vi. Further, an order dated 12.02.2025 was passed by Hon'ble NGT wherein it directed following:

“3. Respondent No. 7 & 8 have filed the reply dated 04.02.2025 disclosing that it has complied with all the 24 recommendations of the CPCB. Hence, the CPCB is directed to verify the compliance status by the Respondent no. 7 & 8.”

“4. On perusal of the reply dated 04.02.2025 filed by Respondent no. 7 & 8, we find that at serial no. 8 in the chart therein it is stated that no effluents were discharged by the distillery. The unit has complied with Zero Liquid Discharge (ZLD) norms as per CPCB but, in paragraph 9 of the reply it is stated that fresh agreements have been executed with 98 farmers and the answering respondent is supplying treated water for irrigation to nearby agricultural land (total 102.22 hectares). Hence, Respondents No. 7 & 8 are required to explain if they are fully compliant with ZLD norms, from where they are supplying the treated water to the farmer and if the treated water is meeting the prescribed standard for irrigation. Respondents No. 7 & 8 are also required to disclose if the Sulphur Recovery System (SRS) has been installed and if yes, the efficacy of its working.”

Copy of Hon'ble NGT order dated 12.02.2025 is placed at **Annexure – 1**.

2. INSPECTION REPORT IN COMPLIANCE TO HON'BLE NGT ORDER DATED 12.02.2025

2.1. Details of Site Visit

In compliance to Hon'ble NGT order dated 12.02.2025, for verification of correctness of the compliance reflected by project proponent i.e. **M/s Rai Bahadur Narayan Singh Sugar Mills Ltd. (Distillery & Sugar unit), Village- Laksar, Dist.-Haridwar, Uttarakhand** (hereinafter referred as “the unit”) as submitted by it in Hon'ble NGT , a team of CPCB officials visited M/s Rai Bahadur Narayan Singh Sugar Mills Ltd. (Distillery & Sugar unit), Village- Laksar, Dist.-Haridwar, Uttarakhand (i.e. project proponent) and Laksar drain (upstream of unit, downstream of unit, and near Akhoda Kalan village (1.68 Kms) downstream of unit before confluence with Hadwa drain) on 26.03.2025.

Following officials from CPCB carried out the site visit:

1. Mrs. Reena Satavan, Scientist-E,
2. Ms. Anshul Kumari, Research Associate – III,
3. Mr. Vipin Kumar, Research Associate – III, and
4. Mr. Ankit Shukla, Senior Research Fellow

2.2. Details of the sampling

Wastewater and groundwater samples were collected by the inspection team from following locations:

Wastewater:

- a. Raw Spent wash, Bio-methanated spent wash (Outlet of bio-digester), Concentrated spent wash (i.e. outlet of Multi Effect Evaporator (MEE))
- b. Inlet & outlet of Condensate Polishing unit (CPU)
- c. Inlet & outlet of Effluent Treatment Plant (ETP), Aeration tank of ETP and Lagoon of Sugar unit
- d. Inlet & outlet of Sulphur Removal System (SRS) installed with ETP in Sugar unit
- e. Inlet & outlet of 03 nos. of STPs
- f. Laksar drain upstream of unit, downstream of unit, and near Akhoda Kalan village (1.68 km) downstream of unit before confluence with Hadwa drain

Freshwater: Groundwater samples collected from Borewell in Sugar plant.

Detailed inspection reports of the Distillery and Sugar plant are presented in subsequent sections 2.3 & 2.4, respectively.

2.3. Inspection report of Distillery unit

2.3.1. Statuary compliance status:

- The unit has obtained Consolidated Consent & Authorization (CCA) issued by UKPCB dated 27.08.2024 under Section-25 of the Water (Prevention & Control of Pollution) Act, 1974, under Section-21 of the Air (Prevention & Control of Pollution) Act, 1981 and under Rule – 6 (2) of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 having validity upto 31/03/2028 for carrying out production of Rectified Spirit (RS)/ ExtraNeural Alcohol (ENA)/Ethanol @ 60 KLPD and 60 KLPD Ethanol using C–Heavy/ B–Heavy molasses @ 372 KLPD, and operation on Zero Liquid Discharge (ZLD). (**Refer Annexure – 2**)

Other salient conditions of the CCA are as follows:

- i. Unit shall treat all its process and non-process effluents such as Spent lees, Process condensates, Boiler RO reject, CT blowdown, Softener/DM plant backwash, Pump gland cooling water etc. through CPU and recycled back in the process.
 - ii. The unit shall install mass flowmeters with totalizers at inlet and outlet of Multi Effect Evaporator (MEE) (concentrate) and shall connect the same with CPCB and Uttarakhand Pollution Control Board's servers.
 - iii. The unit shall install electromagnetic flowmeters with totalizer at CPU inlet & outlet and at water recirculation points like make-up water for cooling towers & in process. The unit shall have separate energy meter for ETP/CPU and maintain the duly signed logbook of the same.
 - iv. Maximum storage of Bio-methanated spent wash utilized in dryer shall strictly be seven days (07) equivalent of concentrated Bio-methanated spent wash generated. Excess storage facilities beyond this shall be levelled and dismantled.
 - v. Unit shall dispose the spent wash through Bio-methanation followed by MEE and concentrated spent wash will be dried through Spray Dryers- 02 Nos. and the powder will be used as Potash rich manure (45 TPD each Dryer).
 - vi. Industry shall install the flow meter at STP inlet and outlet and maintain the daily logbook.
- The Central Ground Water Authority (CGWA) granted No Objection Certificate (NOC) dated 21.03.2025 to the distillery unit for groundwater abstraction @ 400 KLD from 01 no. of borewell. The NOC is having validity upto 25.11.2027. (**Refer Annexure – 3**)

2.3.2. Operational status and Production:

- During visit, the manufacturing processes in the distillery plant was found operational.
- The inspection team observed that the distillery unit has 02 nos. of distillation plants each having 60 KLPD production capacity (i.e. a total of 120 KLD). However, on the day of visit only 01 distillation plant was operational at total production capacity of 60 KLPD using B – heavy molasses as raw material.
- The inspection team collected the data for alcohol production certified by Excise Department for duration from 01.02.2025 to 25.03.2025. Details of monthly/avg. daily production are mentioned in Table 1 below:

Table 1: Month wise Alcohol production

Month	Distillation plant – 1 Alcohol Production (KL)	Distillation plant – 2 Alcohol Production (KL)	Total Production (KL)	No. of operational days	Avg. daily Production (KLPD)
	A	B	C = A+B	D	E = C/D
February 2025	1271.35	671.14	1942.49	28	69.37
March , 2025 (upto 25th)	479.84	479.70	959.54	16	59.97
Total	1751.19	1150.84	2902.03	44	65.95
Total Alcohol production: 2902.03 KL					
Overall Total operational days: 44 days					
Average alcohol production: 65.95 KLPD					

- As per the data provided by unit for duration from 01.02.2025 to 25.03.2025, the average production of alcohol is 65.95 KLPD against the permitted production capacity of 120 KLPD using B – heavy molasses as raw material, which is in compliance with consent condition.

2.3.3. Groundwater abstraction and consumption:

- During visit, it was observed that the unit has installed 01 no. of borewell within its premises for meeting freshwater requirements. The borewell is equipped with electromagnetic flow meter (including totalizer).
- The borewell and flow meter were found in functional condition and readings were noted as: *Instantaneous flow rate – 5.0 m³/hr; Totalizer reading – 291657.436 m³*
- The team collected the data for groundwater abstraction/consumption from the borewell for duration from 01.02.2025 to 25.03.2025. Details of monthly/avg. daily groundwater abstraction/consumption are mentioned in Table 2 below:

Table 2: Month wise groundwater abstraction/consumption from Borewell located within premises of molasses based distillery plant

Month	Groundwater abstraction (KL)	No. of operational days
February 2025	4799	28
March , 2025 (upto 25th)	3513	22
Total Groundwater abstraction/consumption: 8312 KL		
No. of days: 50		
Average Groundwater abstraction/consumption: 166.24 KLD		
Specific fresh water consumption = 2.86 KL/KL of alcohol		

- As per the data provided by unit for duration from 01.02.2025 to 25.03.2025, the average groundwater abstraction from borewell is 166.24 KLD which is in compliance with the condition of groundwater abstraction @ 400 KLD stipulated under groundwater NOC issued by CGWA.

2.3.4. Effluent management scheme and verification of ZLD in distillery unit:

- As observed by the inspection team, the effluent management scheme adopted by the unit to achieve ZLD is presented below in Figure 1:

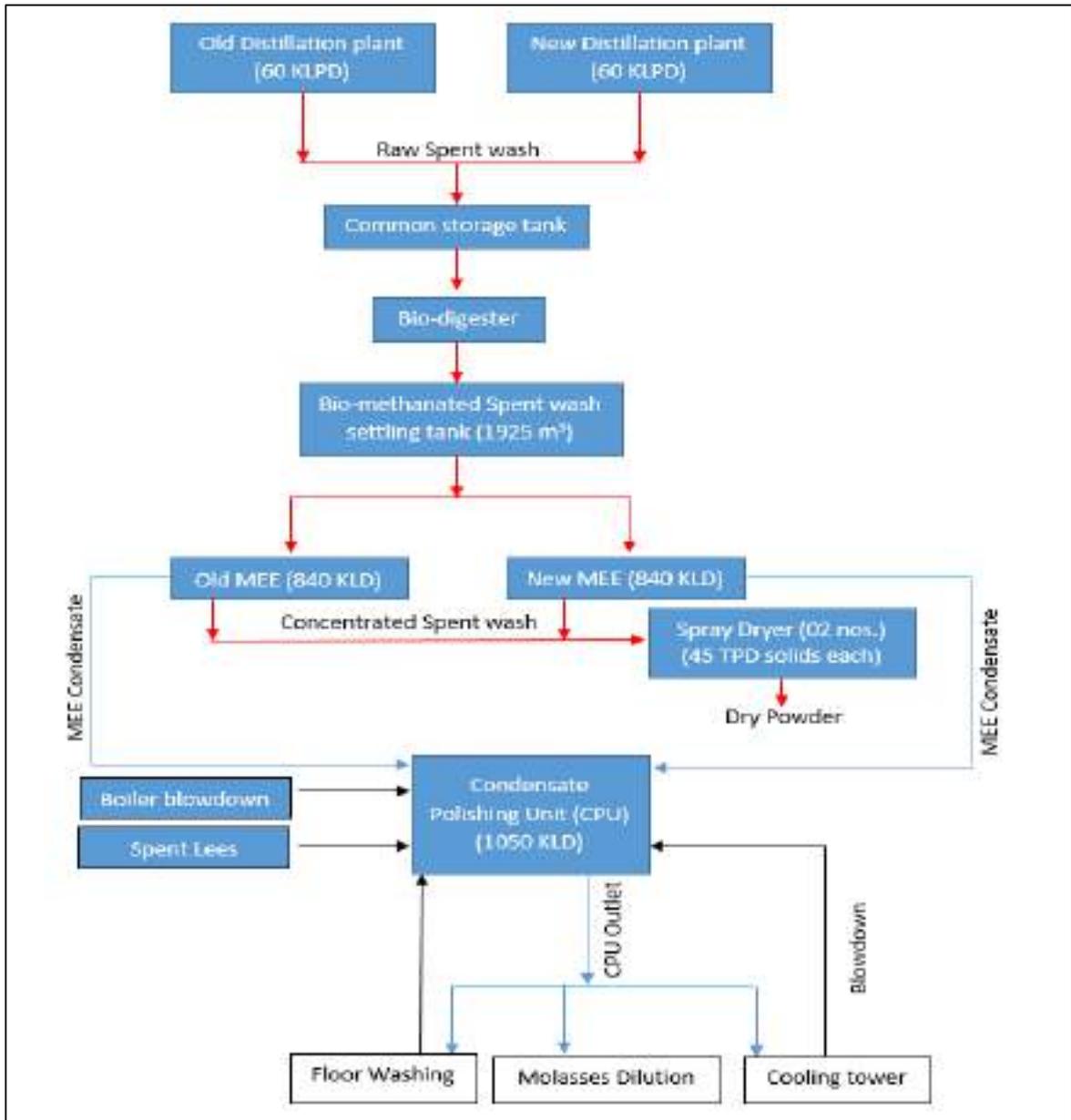


Figure 1: ZLD scheme in distillery plant as observed by inspection team

- All the process equipments/machineries installed for effluent management such as Bio-digester, MEE (01 out of 02) & Dryer (both), and CPU were found operational.
- The unit has installed mass flow meters with totalizer at inlet and outlet of both the

MEE. All mass flow meters are connected to CPCB server.

- Reading of mass flow meters installed at different locations in distillery plant were also noted by the inspection team during visit as mentioned in Table 3 below:

Table 3: Reading of mass flow meters installed at different locations in distillery plant noted on 26.03.2025 (01:00 PM – 05: 00 PM)

S. No.	Location of flow meter	Instantaneous reading (kg/hr)	Totalizer reading (kg)
1.	Raw spent wash generation (old distillation plant)	199720	528685300.44
2.	Raw spent wash generation (new distillation plant)	0	127424659
3.	Old MEE Inlet	15282	538081508
4.	Old MEE outlet	4552	173991476.7
5.	New MEE Inlet	0	129599088.66
6.	New MEE outlet	36028	38558266.78
7.	Feed to old dryer	2.6 m ³ /hr	067510.792 m ³
8.	Feed to new dryer	1.98 m ³ /hr	37557.37 m ³

- The inspection team obtained the logbooks for duration from 01.02.2025 to 25.03.2025 regarding raw spent wash generation, feed to MEE, MEE outlet (concentrated spent wash), MEE condensate, concentrated spent wash feed to dryer, and powder generation, and their details are mentioned in Table 4 below:

Table 4: Details of raw spent wash generation, feed to MEE, MEE outlet (concentrated spent wash), MEE condensate, concentrated spent wash feed to dryer, and powder generation during 01.02.2025 to 25.03.2025

Particulars	Quantity
Total Raw Spent wash generation Or considering sp. gravity of 1.06 for raw spent wash Total Raw Spent wash generation in KL = 17349.83/1.06 = 16367.76 KL	17349.83 MT Or 16367.76 KL
Bio-methanated Spent wash Feed to MEE	17350.65 MT
Concentrated Spent wash generated from MEE	5151.44 MT
MEE condensate	12199.2 MT
Feed to Dryer	5151.44 MT
Powder generation	1975 MT
Specific spent wash generation = Total spent wash production in KL/ Total alcohol production in KL = 16367.76 KL/ 2902.03 KL	5.64 KL/KL of alcohol

- The team collected samples of raw spent wash, feed to MEE, Bio-methanated spent

wash (BMSW), feed to dryer and spent wash consumed in bio-composting. The analysis results are mentioned below in Table 5:

Table 5: Analysis results of spent wash samples collected from unit

S. No.	Sample Location	pH	COD (mg/l)	BOD (mg/l)	TS (mg/l)	(% Total Solids)
1.	Raw spent wash	4.9	107011	49286	93072	9.30
2.	BMSW feed to MEE	7.9	58609	16200	52564	5.25
3.	MEE Concentrate (old plant) feed to dryer	7.8	315372	72500	370308	37.03

- i. Analysis results of the raw spent wash samples shows pH- 4.9, COD – 107011 mg/l, BOD – 49286 mg/l, and Total Solids – 93072 mg/l.
- ii. Analysis results of the Bio-methanated spent wash samples (feed to MEE) shows pH- 7.9, COD – 58609 mg/l, BOD – 16200 mg/l, and Total Solids – 52564 mg/l.
- iii. Analysis results of the concentrated spent wash samples collected from the outlet of MEE (i.e. feed to dryer) shows pH- 7.8, COD – 315372mg/l, BOD – 72500 mg/l, and Total Solids – 370308 mg/l.

Condensate Polishing Unit (CPU)

- For treatment of MEE condensate, and other low strength effluents, the unit has installed common Condensate Polishing Unit (CPU) of capacity 1050 KLD (for sugar and distillery unit). The treatment scheme of CPU is as below:

Inlet – Equalization tank → UASB reactor → Aeration tank → Secondary clarifier → Chemical dosing tank → Lamella clarifier → Dual Media filter → Activated Carbon Filter → Outlet to cooling tower makeup and for molasses dilution in fermenters.

- Effluent samples were collected from the inlet and outlet of CPU and analysis results are shown below in Table 6:

Table 6: Analysis results of samples collected from CPU

S. No.	Sample Location	pH	COD (mg/l)	BOD (mg/l)	TSS (mg/l)	Sulphate (mg/l)	TDS (mg/l)
1.	CPU inlet	8.2	2763	1024	25	97	204
2.	CPU outlet	6.6	95	26	23	172	552

- Analysis result of sample collected from the outlet of CPU shows pH- 6.6, COD – 95 mg/l, BOD – 26 mg/l, Sulphate-172 mg/l and Total Dissolved Solid – 552 mg/l. The unit is using the treated effluent from CPU outlet as make up water for cooling tower and for molasses dilution in the process.

Lagoon

- As observed, the unit has filled/levelled all the lagoons with boiler ash.
- Only a settling tank of capacity 1925 m³ was being used for storing Bio-methanated spent (BMSW) and feeding into the MEEs for further concentration.

2.4. Inspection report of Sugar unit**2.4.1. Statuary compliance status:**

- The unit has obtained Consolidated Consent & Authorization (CCA) issued by UKPCB dated 27.08.2024 under Section-25 of the Water (Prevention & Control of Pollution) Act, 1974, under Section-21 of the Air (Prevention & Control of Pollution) Act, 1981 and under Rule – 6 (2) of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 having validity upto 31.03.2029 for **cane crushing @ 10000 TCD. (Refer Annexure – 4)**

Other salient conditions of the CCA are as follows:

- i. Specific freshwater consumption @ 100 Litre/Tonne of cane crushed
 - ii. Specific effluent discharge @ 192 Litre/Tonne of cane crushed
 - iii. Industrial effluent discharge @ 1050 KLD
 - iv. Domestic wastewater discharge @ 30 KLD
- The Central Ground Water Authority (CGWA) granted No Objection Certificate (NOC) dated 17.01.2025 to the sugar unit for groundwater abstraction @ 460 KLD from 01 no. of borewell. The NOC is having validity upto 15.07.2027. **(Refer Annexure – 5)**

2.4.2. Operational status and Production:

- During visit, the manufacturing processes in the sugar plant were found operational.
- The inspection team collected the data for cane crushing for duration from 01.02.2025 to 25.03.2025. Details of monthly/avg. daily cane crushing are mentioned in Table 7 below:

Table 7: Month wise cane crushing details

Month	Cane crushing (MT)	Sugar production (MT)	No. of operational days	Avg. daily cane crushing (TCD)	Avg. daily Production (MT/day)
	A	B	C	D = A/C	E = B/C
February 2025	270730	27639.6	28	9668.93	987.13
March , 2025 (upto 25th)	241930	25580	25	9677.2	1023.20
Total	512660	53219.6	53	9672.83	1004.14

- As per the data provided by unit for duration 01.02.2025 to 25.03.2025, the average cane crushing is 9672.83 TCD against the permitted crushing capacity of 10,000 TCD.

2.4.3. Groundwater abstraction and consumption:

- During visit, it was observed that the unit has installed 01 no. of borewell within its premises for meeting freshwater requirements. The borewell is equipped with electromagnetic flow meter (including totalizer).
- The borewell and flow meter were found in functional condition and readings were noted as: Instantaneous flow rate – 46.2 m³/hr; Totalizer reading – 100651.542 m³
- The team collected the data for groundwater abstraction/consumption from the borewell for duration from 01.02.2025 to 25.03.2025. Details of monthly/avg. daily groundwater abstraction/consumption are mentioned in Table 8 below:

Table 8: Month wise groundwater abstraction/consumption from Borewell located within premises of sugar unit

Month	Groundwater abstraction (KL)	No. of operational days
February 2025	9212	28
March , 2025 (upto 25th)	8241	25
Total Groundwater abstraction/consumption: 17453 KL		
No. of days: 53		
Average Groundwater abstraction/consumption: 329.30 KLD		
Specific fresh water consumption = 34.04 Litre/Ton of cane crushed		

- As per the data provided by unit for duration from 01.02.2025 to 25.03.2025, the average groundwater abstraction from borewell is 329.30 KLD which is in compliance with the condition of groundwater abstraction @ 460 KLD stipulated under groundwater NOC issued by CGWA.
- Samples were collected from the Borewell (sugar unit) and analysis results are mentioned in table 9 below:

Table 9: Analysis results of samples collected from Borewell (Sugar unit)

Parameters	Borewell (Sugar Unit)	BIS IS10500:2012 (Permissible limit in absence of alternative source)
pH	7.85	6.5-8.5
Conductivity (µmho/cm)	258	-
TDS	150	2000
COD	BDL (<2)	-
Total Hardness	68	600
Chloride	08	1000
Phosphate	0.311	-
Fluoride	0.33	1.5
Colour (Hazen)	BDL (<5)	15
Sulphate	10	400
Nitrate	4.84	45
Total Alkalinity	124	600
<i>Note: All values are in mg/l except pH, colour, and conductivity</i>		

- Analysis results of samples collected from Borewell located in premises of sugar unit, the water quality parameters were found within the permissible limit as per BIS IS 10500:2012.

2.4.4. Effluent management scheme in sugar unit:

- As per the consent conditions, the unit has permission to discharge treated effluent @ 1050 KLD.
- As observed by the inspection team, the effluent management scheme adopted by the unit to achieve compliance with stipulated discharge norms is presented below in Figure 2:

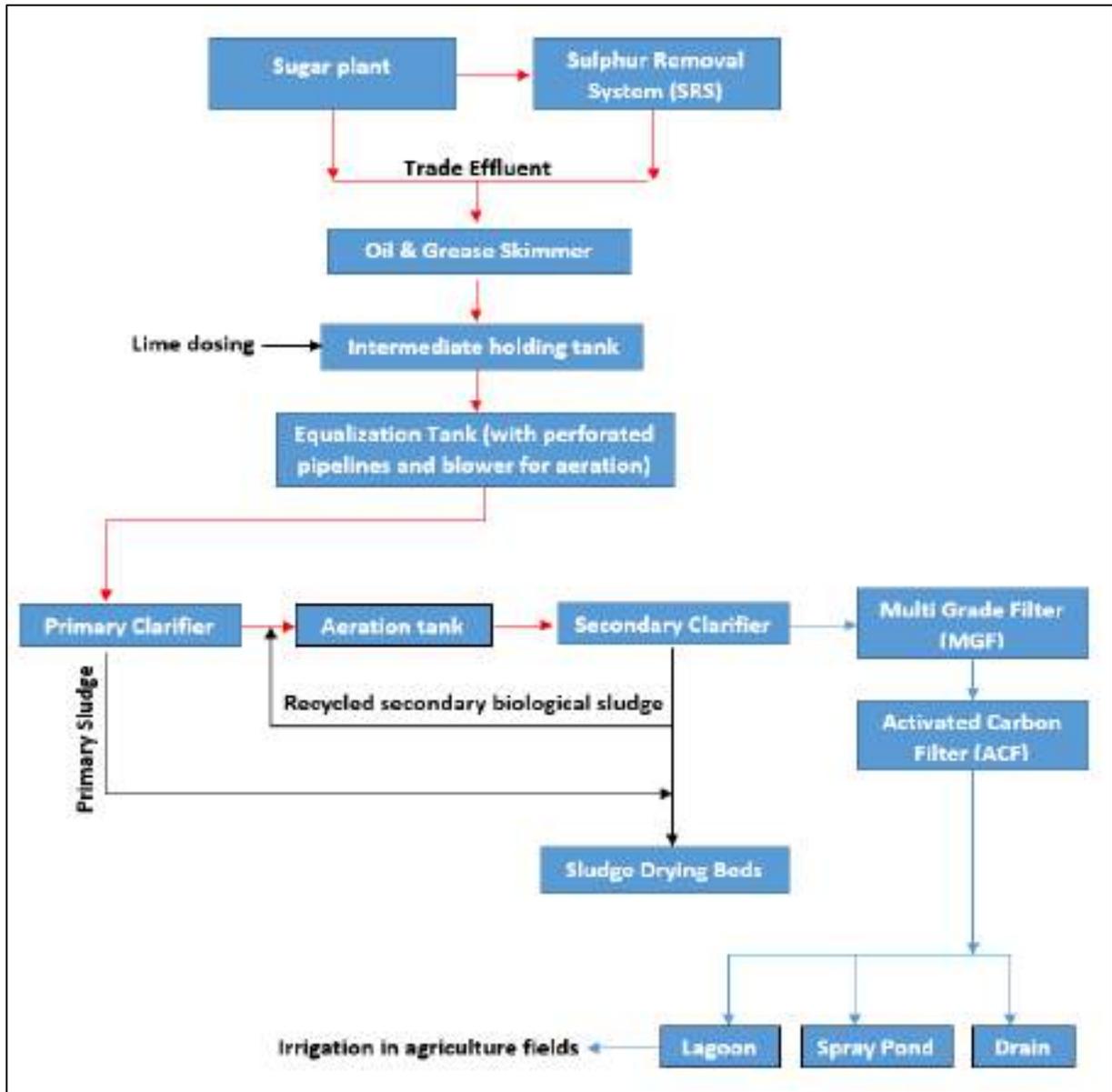


Figure 2: Effluent management scheme adopted by the unit (sugar plant) as observed by the inspection team

- All the machineries installed for effluent treatment such as Oil & Grease skimmer, Chemical dosing system, Equalization tank, Primary Clarifier, Aeration tank, Secondary clarifier, Multi Grade Filter (MGF) and Activated Carbon Filter (ACF) found in functional condition.
- The unit has installed flow meters at different locations in the ETP and treated effluent recycling line and readings of the same were also noted by the inspection team during visit. The inspection team also obtained the logbooks for duration from 01.02.2025 to 25.03.2025 regarding effluent feed to SRS, feed to ETP (i.e. ETP Inlet), Treated effluent from ETP (i.e. ETP Outlet), Treated effluent feed to Spray pond, and Treated effluent feed to Lagoon. Readings of flow meters and effluent details are mentioned in Table 10 below:

Table 10: Readings of flow meters and effluent details

S. No.	Location of flow meter	Instantaneous reading (m ³ /hr)	Totalizer reading (m ³)	Quantity (KLD)
1.	Total effluent feed to ETP (i.e. ETP Inlet)	33	339181	1080.87
2.	Treated effluent from ETP (i.e. ETP Outlet)	57.96	585896	1080.55
3.	Treated effluent feed to Spray pond	27.1	241410.391	818.56
4.	Treated effluent feed to Lagoon for irrigation	23.99	77261.12	234.19
5.	SRS Inlet	17.4	108480.33	367.53
Quantity of treated effluent discharged into drain = Treated effluent from ETP (i.e. ETP Outlet) – (Treated effluent feed to Spray pond + Lagoon) = 1080.55 – (818.56 + 234.19) = 27.80 KLD				

- The treated effluent from ETP is used for irrigation in agriculture fields, reused as makeup water in spray pond, and remaining is discharged into Laksar drain.
- As evident from above table 10, total average daily quantity of treated effluent discharge is 261.98 KLD (i.e. quantity used in irrigation + discharge into drain = 234.19 + 27.80 = 261.99 KLD) against the consented discharge quantity of 1050 KLD. Furthermore, above data also indicates that the unit is recycling 75.75 % of treated effluent, 21.67 % is used for irrigation and remaining (around 2.6 %) is disposed into Laksar drain.
- The team collected effluent samples from Inlet & outlet of Effluent Treatment Plant (ETP), Aeration tank of ETP and Lagoon of Sugar unit, Inlet & outlet of SRS installed with ETP. The analysis results are mentioned below in Table 11:

Table 11: Analysis results of samples collected from inlet, outlet & aeration tank of ETP, and lagoon in the Sugar unit

Location	pH	BOD	COD	TSS	TDS	SO ₄ ²⁻	Oil & grease
SRS Inlet	6.6	701	1104	266	2252	415	-
SRS Outlet	6.3	579	930	160	2208	448	-
ETP Inlet	5.2	880	1453	202	2820	470	-
ETP Outlet	7.6	02	16	BDL (<10)	668	326	BDL (<5)
Lagoon (Sugar unit)	7.9	06	24	BDL (<10)	852	257	-
Norms as per consent	5.5 – 8.5	30	250	30	2100	-	10
Aeration Tank: MLSS – 11160 mg/l & MLVSS – 5342 mg/l							

- Analysis results of samples collected from outlet of ETP (sugar unit) & lagoon (sugar unit) indicates compliance w.r.t. stipulated discharge norms.

2.4.5. Sewage management scheme:

- Unit has installed 03 nos. of STPs of capacity 15 KLD each for treatment of sewage generated from residential dwellings in Officers colony, Gurudwara colony & New colony. All 03 nos. of STPs were found operational during visit.
- STPs receive wastewater from majorly two sources:
 - Wastewater generated from kitchens, washrooms, etc. (except toilets)
 - Overflow of septic tanks provided for storage of wastewater generated from toilets
- The treatment scheme observed during visit is as below:

Raw Sewage → *Screen chamber & Collection tank* → *MBBR tank (02 nos.)* → *Tube settler* → *Clear water tank* → *MGF* → *ACF* → *Outlet to gardening.*
- Filter press has been installed for mechanical dewatering of raw sludge collected from the bottom of tube settler.
- Flow meters have been installed at inlet and outlet of all 03 nos. of STPs.
- Samples were collected from inlet and outlet of all 03 nos. of STPs and analysis results are mentioned in table 12 below:

Table 12: Analysis results of samples collected from inlet & outlet of 03 nos. of STPs installed in residential colony of Sugar unit

Location	pH	BOD	COD	TSS	TDS	NO ₃ ⁻	SO ₄ ²⁻
STP – 1 (Officers colony)							
Inlet	7	45	108	20	412	BDL	78
Outlet	6.7	02	26	BDL (<10)	1344	10.2	170
STP – 2 (Gurudwara colony)							
Inlet	7.2	39	120	37	412	5.6	66
Outlet	8	01	13	BDL (<10)	560	16.6	109
STP – 3 (New colony)							
Inlet	7.1	37	102	60	320	0.8	15
Outlet	8.1	BDL (≈ 1)	10	10	424	17.1	50
Standards as per MoEF&CC notification dated 13.10.2017	6.5 – 9.0	30	-	100	-	-	-

- Analysis results of samples collected from outlet of all 03 nos. of STPs indicates compliance w.r.t. stipulated discharge norms.

3. FACTUAL STATUS W.R.T TO THE REPLY DATED 04.02.2025 FILED BY RESPONDENT NO. 7 & 8 W.R.T. 24 RECOMMENDATIONS MENTIONED IN CPCB'S REPORT DATED 22.07.2024

The inspection team visited the industrial complex of project proponent i.e. **M/s Rai Bahadur Narayan Singh Sugar Mills Ltd. (Distillery & Sugar unit), Village- Laksar, Dist.-Haridwar, Uttarakhand.** The point-wise factual status w.r.t to the reply dated 04.02.2025 filed by Respondent No. 7 & 8 in Hon'ble NGT w.r.t. 24 recommendations made by CPCB in the report dated 22.07.2024 is presented below:

Table 13: Factual status w.r.t to the reply dated 04.02.2025 filed by Respondent No. 7 & 8 w.r.t. 24 recommendations mentioned in CPCB's report dated 22.07.2024

S. No. as per reply submitted by project proponent	Recommendations made in the inspection reports dated 21.11.2023, 24.01.2024 & 22.07.2024, Compliance submitted by project proponent vide its reply dt. 04.02.2025, and factual status observed by CPCB team during visit on 25 th March, 2025
1.	<p><u>Recommendation</u></p> <p>Provision of laying out a closed conduit pipe line at Laksar drain (which is currently flowing as open channel) starting from 500 meters upstream (u/s) to 500 meter downstream (d/s) of unit shall be made by the unit under supervision of UKPCB to rule out any possibility of discharge of treated/untreated effluent into drain.</p> <p><u>Compliance submitted by project proponent:</u></p> <ul style="list-style-type: none"> • Unit written letter dated 31.03.2024 to seek permission from Local body administration for installation of Conduit Pipe, however Local administration denied on 15.04.2024. <p><u>Factual status observed by CPCB team on recent visit:</u></p> <ul style="list-style-type: none"> • Unit representative informed that this drain is in jurisdiction of Nagar Panchayat, Laksar, therefore the unit vide letter dated 31.03.2024 sought permission from district administration regarding construction/laying of closed conduit (pipe) over Laksar drain. • District administration (i.e. Nagar palika parishad) vide letter dated 15.04.2024 communicated to the unit that considering the fact that unit falls under flood prone area, construction/laying of closed conduit pipe is not advisable. Hence, the unit has not provided closed conduit pipe line at Laksar drain. <p>Copy of unit's letter dated 31.03.2024 is attached as Annexure – 6. Copy of letter dated 15.04.2024 from District administration (i.e. Nagar palika parishad) is attached as Annexure – 7.</p>
2., 4, 21	<p><u>Recommendation:</u></p> <ul style="list-style-type: none"> • It shall be the responsibility of the unit to maintain the quality of Laksar drain at downstream of the unit in sync with the quality at upstream of the unit. • Based on the analysis results, the quality of Laksar drain near Akhoda Kalan village (1.68 Kms*) shows Deteriorated Condition, therefore, the possibility of effluent mixing with sewage in drain cannot be ruled out.

- As per consent provided by UKPCB, unit has to install the sewage treatment plant (STP) in their premises for treatment of generated sewage. However, as per the joint inspection report dated 21.11.2023, no STP is installed by the unit thus violating the consent condition.

Compliance submitted by project proponent:

- UKPCB is monitoring water quality of Laksar Drain regularly on monthly basis.
- The unit has installed 03 nos. of STPs having installed capacity of 15 KLD each, while the residential colony of unit generates 40 KLD only.

Factual status observed by CPCB team on recent visit:

- To verify the quality of Laksar drain, the inspection team collected samples from the Laksar drain at different locations. Details are mentioned below in Table 14:

Table 14: Analysis results of samples collected from Laksar drain

Parameters	Laksar drain upstream of unit	Laksar drain downstream of unit	Laksar drain near Akhoda Kalan village (1.68 Kms downstream of unit)
pH	7.4	7	6.9
BOD (mg/l)	10	97	170
COD (mg/l)	36	196	299
TSS (mg/l)	47	17	102
TDS (mg/l)	472	408	552
NO ³⁻ (mg/l)	4.6	BDL	BDL
SO ₄ ²⁻ (mg/l)	81	51	309

- The analysis results of samples collected from drain at above mentioned locations indicate no industrial impact of sugar and distillery plant and reflect typical characteristics of sewage.

Sewage management within the industrial complex

- Unit has installed 03 nos. of STPs of capacity 15 KLD each for treatment of sewage generated from residential dwellings in Officers colony, Gurudwara colony & New colony. All 03 nos. of STPs were found operational during visit.
- STPs receive wastewater from majorly two sources:
 - Wastewater generated from kitchens, washrooms, etc. (except toilets)
 - Overflow of septic tanks provided for storage of wastewater generated from toilets
- The treatment scheme observed during visit is as below:
Raw Sewage → Screen chamber & Collection tank → MBBR tank (02 nos.) → Tube settler → Clear water tank → MGF → ACF → Outlet to gardening.
- Filter press has been installed for mechanical dewatering of raw sludge collected from the bottom of tube settler.
- Flow meters have been installed at inlet and outlet of all 03 nos. of STPs.
- Samples were collected from inlet and outlet of all 03 nos. of STPs and analysis results are mentioned in table 15 below:

Table 15: Analysis results of samples collected from inlet & outlet of 03 nos. of STPs installed in residential colony of Sugar unit

Location	pH	BOD	COD	TSS	TDS	NO ₃ ⁻	SO ₄ ²⁻
STP – 1 (Officers colony)							
Inlet	7	45	108	20	412	BDL	78
Outlet	6.7	02	26	BDL (<10)	1344	10.2	170

STP – 2 (Gurudwara colony)																									
Inlet	7.2	39	120	37	412	5.6	66																		
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STP – 3 (New colony)																									
Inlet	7.1	37	102	60	320	0.8	15																		
Outlet	8.1	BDL (≈ 1)	10	10	424	17.1	50																		
Standards as per MoEF&CC notification dated 13.10.2017	6.5 – 9.0	30	-	100	-	-	-																		
<ul style="list-style-type: none"> Analysis results of samples collected from outlet of all 03 nos. of STPs indicates compliance w.r.t. stipulated discharge norms <p><u>Compliance status:</u> Complying</p>																									
3.	<p><u>Recommendation:</u></p> <ul style="list-style-type: none"> The unit shall install flow meters at the abstraction points on both the bore wells of sugar and distillery unit. <p><u>Compliance submitted by project proponent:</u> <i>Complied</i></p> <p><u>Factual status observed by CPCB on recent visit:</u></p> <table border="1"> <thead> <tr> <th>Borewell Location</th> <th>Permitted no. of borewells as per NOC from CGWA</th> <th>Actual no. of borewells installed</th> <th>Flow meter installed (Yes/No)</th> <th>Instantaneous reading (m³/hr)</th> <th>Totalizer reading (m³)</th> </tr> </thead> <tbody> <tr> <td>Sugar unit</td> <td>01</td> <td>01</td> <td>Yes</td> <td>46.2</td> <td>100651.54</td> </tr> <tr> <td>Distillery unit</td> <td>01</td> <td>01</td> <td>Yes</td> <td>5.0</td> <td>291657.43</td> </tr> </tbody> </table> <p><u>Compliance status:</u> Complying</p>							Borewell Location	Permitted no. of borewells as per NOC from CGWA	Actual no. of borewells installed	Flow meter installed (Yes/No)	Instantaneous reading (m ³ /hr)	Totalizer reading (m ³)	Sugar unit	01	01	Yes	46.2	100651.54	Distillery unit	01	01	Yes	5.0	291657.43
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Sugar unit	01	01	Yes	46.2	100651.54																				
Distillery unit	01	01	Yes	5.0	291657.43																				
5. 6. & 7	<p><u>Recommendation:</u></p> <ul style="list-style-type: none"> The unit had 3 lagoons of total capacity of 5222 m³ which were found fully filled with raw spent wash/ bio-methanated spent wash having total solids percentage less than 17% even during monsoon season and as these lagoons are located adjacent to Laksar drain hence there is potential of spillage/ overflow/ discharge of spent wash in the Laksar drain. This is the violation of CPCB direction dated 07.12.2015. The unit shall consume the concentrate spent wash stored in lagoons of capacity 1925m³ and 1375 m³ in dryer in environmentally sound manner thereafter, unit shall dismantle 02 lagoons. The unit was storing Bio-methanated spent wash (BMSW)/ raw spent wash in lagoons with solid content <30%, which is in violation of CPCB direction dated 07.12.2015. <p><u>Compliance submitted by project proponent:</u></p> <ul style="list-style-type: none"> <i>Recommendation no. 5 & 7 – complied</i> <i>Recommendation no. 6 – Lagoons are dismantled.</i> 																								

	<p><u>Factual status observed by CPCB on recent visit:</u></p> <ul style="list-style-type: none"> • As already submitted in the inspection report dated 22.07.2024, the unit has consumed the legacy spent wash through MEE & Dryers, and the unit has filled/levelled 02 nos. of lagoons of capacity 1925 m³ and 1375 m³ (located adjacent to Laksar drain) with boiler ash. • The unit is not storing concentrated spent wash as it is directly feeding it into dryers, hence the condition for maintaining solid content >30% in lagoons as stipulated under CPCB direction dated 07.12.2015 is not applicable. • The unit has now having one settling tank of capacity 1925 m³ which is dedicated for holding bio-methanated spent wash and subsequently feeding into MEE. • No overflow/spillage/discharge of spent wash/effluent from distillery unit found in the Laksar drain. <p><u>Compliance status: Complying</u></p>
8.	<p><u>Recommendation:</u></p> <ul style="list-style-type: none"> • The unit is discharging its distillery effluent from bio-composting/lagoons and sugar effluent in to the Laksar drain, which is the violation to Zero Liquid Discharge (ZLD)/discharge condition resulting in high pollution level of BOD (626 mg/l) and COD (1638 mg/l) which is about 17% higher than the upstream water quality of the drain. <p><u>Compliance submitted by project proponent:</u></p> <ul style="list-style-type: none"> • <i>No effluents discharged by the distillery. Unit has complied with ZLD norms as per CPCB.</i> <p><u>Factual status observed by CPCB team on recent visit:</u></p> <ol style="list-style-type: none"> 1. No bio-composting activities were going on and the infrastructure such as covered shed (including truss structure) found dismantled. 2. Distillery unit is operating on ZLD in compliance with the consent condition and the details of ZLD scheme are mentioned at section 2.3.4 (Figure 1), furthermore the data collected for effluent management in distillery plant for duration from 01.02.2025 – 25.03.2025, also reflects the same. Details mentioned at section 2.3.4 (Table 4). 3. As stipulated under the consent issued by UKPCB to the sugar unit (condition no. 6.B.a), the treated effluent shall be recycled to the maximum extent and remaining treated effluent after tertiary level treatment shall be used for irrigation purpose/disposal. <ul style="list-style-type: none"> - Sugar unit is recycling 75.75 % of treated effluent, 21.67 % is used for irrigation and remaining (around 2.6 %) is disposed into laksar drain. 4. Samples were collected from ETP outlet of sugar unit and analysis results show pH – 7.6 (against the norm of 5.5 – 8.5); BOD – 02 mg/l (against the norm of 30 mg/l); COD – 16 mg/l (against the norm of 250 mg/l); TSS – BDL (against the norm of 30 mg/l); TDS – 668 mg/l (against the norm of 2100 mg/l); Oil & grease – BDL mg/l (against the norm of 10 mg/l). These results indicate compliance w.r.t. stipulated discharge norms 5. Samples were also collected from different locations at Laksar drain and the analysis result indicate no impact of industrial discharge (BOD in the range of 10 – 170 mg/l & COD in the range of 36 – 299 mg/l). Details of samples collected from laksar drain are mentioned above in table – 13. <p><u>Compliance status: Complying</u></p>
9., 10. & 11.	<p><u>Recommendation:</u></p>

	<ul style="list-style-type: none"> • In bio-compost yard, the covered shed was damaged and improper. Ready bio-compost was found stored in damaged covered shed. Also, the leachate collection drain and pits were not observed around the periphery of bio-compost yard for leachate management. Also, the unit had not constructed any boundary wall near the compost yard. This is the violation of CPCB bio-compositing SOP. • The unit shall dispose all the stored ready bio-compost and press mud in bio-compost yard by adapting appropriate scientific method under the supervision of UKPCB within two months and after that the unit shall clean the bio-compost area and shall submit photographic evidence to UKPCB. <p><u>Compliance submitted by project proponent:</u> <i>Complied</i></p> <p><u>Factual status observed by CPCB team on recent visit:</u></p> <ul style="list-style-type: none"> • No bio-composting activities were going on and the infrastructure such as covered shed (including truss structure) found dismantled. Thus there is no relevance of covered shed, leachate collection drain & pits and the applicability of SOP for bio-composting operations is also not relevant. • Unit has cleared the bio-composting area and no ready bio-compost was found stored. • Unit has constructed boundary wall near the bio-compost yard. <p><u>Compliance status:</u> Complying</p>
12.	<p><u>Recommendation:</u></p> <ul style="list-style-type: none"> • The unit shall prepare adequacy and performance assessment report of ZLD scheme for molasses based distillery as unit has expanded its production capacity from 60 KLPD to 120 KLPD and has installed spray dryers as ZLD system. <p><u>Compliance submitted by project proponent:</u></p> <ul style="list-style-type: none"> • <i>NSI report on Sugar and distillery unit at operational session dated 03.02.2025, received on 04.02.2025</i> <p><u>Factual status observed by CPCB team on recent visit:</u></p> <ul style="list-style-type: none"> • The unit has provided a copy of report dated 03.02.2025 titled “Adequacy report for the effluent treatment plant of distillery plant” prepared by National Sugar Institute, Kanpur (NSI), for the expanded production capacity of 120 KLPD, wherein it has been concluded that the unit has adopted spray drying route to achieve ZLD through Bio-methanation followed by MEE followed by Spray dryer and Conventional CPU system for treatment and recycling of condensate and other low strength effluents. <p>Copy of “Adequacy and performance assessment report of ZLD scheme for molasses based distillery” is attached as Annexure – 8</p> <p><u>Compliance status:</u> Complying</p>
13.	<p><u>Recommendation:</u></p> <ul style="list-style-type: none"> • The unit shall comply with the consent conditions issued by UKPCB and shall ensure that no fresh concentrated spent wash shall be disposed through bio-composting and entire spent wash shall be totally disposed through spray dryer. <p><u>Compliance submitted by project proponent:</u> <i>Complied</i></p> <p><u>Factual status observed by CPCB team on recent visit:</u></p>

	<ul style="list-style-type: none"> As per the consent conditions, the unit has stopped bio-composting since 01.01.2024 and shifted to dryer technology for achieving ZLD. <p>Compliance status: Complying</p>																																							
14.	<p>Recommendation:</p> <ul style="list-style-type: none"> Analysis results of samples collected from Bore well (sugar unit), piezo well located within molasses based distillery plant and hand pump located outside of the unit showed high value of COD in the range of 6 to 33 mg/l, which indicate posing potential threat to ground water and need urgent attention towards improvement of housekeeping, prevention of seepage, spillage etc. UKPCB shall carry out detailed assessment of groundwater quality including ground water sampling & analysis in and around the unit to ascertain the groundwater contamination, if any, and need for remediation. Depending on such study, detailed remedial action plan be also prepared and executed by UKPCB in time bound manner. <p>Compliance submitted by project proponent: Complied</p> <p>Factual status observed by CPCB team on recent visit:</p> <ul style="list-style-type: none"> The CPCB inspection team collected the groundwater samples from the Borewell (sugar unit) and analysis results are mentioned in table 16 below: <p>Table 16: Analysis results of samples collected from Borewell (Sugar unit)</p> <table border="1" data-bbox="493 981 1422 1630"> <thead> <tr> <th>Parameters</th> <th>Borewell (Sugar Unit)</th> <th>BIS IS 10500:2012 (Permissible limit in absence of alternative source)</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>7.85</td> <td>6.5-8.5</td> </tr> <tr> <td>Conductivity (µmho/cm)</td> <td>258</td> <td>-</td> </tr> <tr> <td>TDS</td> <td>150</td> <td>2000</td> </tr> <tr> <td>COD</td> <td>BDL (<2)</td> <td>-</td> </tr> <tr> <td>Total Hardness</td> <td>68</td> <td>600</td> </tr> <tr> <td>Chloride</td> <td>08</td> <td>1000</td> </tr> <tr> <td>Phosphate</td> <td>0.311</td> <td>-</td> </tr> <tr> <td>Fluoride</td> <td>0.33</td> <td>1.5</td> </tr> <tr> <td>Colour (Hazen)</td> <td>BDL (<5)</td> <td>15</td> </tr> <tr> <td>Sulphate</td> <td>10</td> <td>400</td> </tr> <tr> <td>Nitrate</td> <td>4.84</td> <td>45</td> </tr> <tr> <td>Total Alkalinity</td> <td>124</td> <td>600</td> </tr> </tbody> </table> <p><i>Note: All values are in mg/l except pH, colour, and conductivity</i></p> <ul style="list-style-type: none"> Analysis results of samples collected from Borewell located in premises of sugar unit, the water quality parameters were found within the permissible limit as per BIS IS 10500:2012. The unit has sealed the piezowell (located near molasses tanks within distillery plant) with concrete to avoid the possibility of contamination of groundwater in piezowell due to seepage or spillage. Housekeeping found satisfactory. No seepage, spillage of effluent observed within the premise. UKPCB has carried out assessment of groundwater quality including ground water sampling & analysis in and around the unit to ascertain the groundwater contamination, through a private agency namely M/s Noida Testing Laboratory 	Parameters	Borewell (Sugar Unit)	BIS IS 10500:2012 (Permissible limit in absence of alternative source)	pH	7.85	6.5-8.5	Conductivity (µmho/cm)	258	-	TDS	150	2000	COD	BDL (<2)	-	Total Hardness	68	600	Chloride	08	1000	Phosphate	0.311	-	Fluoride	0.33	1.5	Colour (Hazen)	BDL (<5)	15	Sulphate	10	400	Nitrate	4.84	45	Total Alkalinity	124	600
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	during 16.08.2024 – 20.08.2024 (Refer UKPCB letter dated 27.09.2024 attached as Annexure - 9). Details are mentioned below:																																																																																						
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15.	<p>Recommendation:</p> <ul style="list-style-type: none"> The unit should get evaluation of its Effluent Treatment Plant (ETP) for its performance from Expert Institute of Repute/Experts in the field. <p>Compliance submitted by project proponent: Complied</p> <p>Factual status observed by CPCB team on recent visit:</p> <ul style="list-style-type: none"> The unit has submitted “Report on validation of ETP performance” dated 03.02.2025 prepared by NSI, Kanpur for sugar plant, for the crushing season 2024 – 2025. Installed new MGF and ACF as per NSI recommendations, and same were found operational. <p>Copy of ETP validation report is attached at Annexure – 10.</p> <p>Compliance status: Complying</p>																																																																																						
16.	<p>Recommendation:</p> <ul style="list-style-type: none"> The unit does not properly operate the effluent treatment plant installed in sugar unit as it was found NON COMPLIANT w.r.t. the notified discharge norms. <p>Compliance submitted by project proponent:</p> <ul style="list-style-type: none"> Complied with all the recommendations. As per NSI and UKPCB, ETP treated water reports as per prescribed norms. Therefore, ETP performance is up-to the mark. 																																																																																						

	<p><u>Factual status observed by CPCB team on recent visit:</u></p> <ul style="list-style-type: none"> • During visit, the sugar ETP was found operational, and the inspection team collected samples from ETP inlet, aeration tank, ETP outlet & lagoon (for sugar unit). Analysis results are mentioned in table 17 below: <p style="text-align: center;">Table 17: Analysis results of samples collected from inlet, outlet & aeration tank of ETP, and lagoon in the Sugar unit</p> <table border="1" data-bbox="483 383 1417 680"> <thead> <tr> <th>Location</th> <th>pH</th> <th>BOD</th> <th>COD</th> <th>TSS</th> <th>TDS</th> <th>SO₄²⁻</th> <th>Oil & grease</th> </tr> </thead> <tbody> <tr> <td>ETP Inlet</td> <td>5.2</td> <td>880</td> <td>1453</td> <td>202</td> <td>2820</td> <td>470</td> <td>-</td> </tr> <tr> <td>ETP Outlet</td> <td>7.6</td> <td>02</td> <td>16</td> <td>BDL (<10)</td> <td>668</td> <td>326</td> <td>BDL (<5)</td> </tr> <tr> <td>Lagoon (Sugar unit)</td> <td>7.9</td> <td>06</td> <td>24</td> <td>BDL (<10)</td> <td>852</td> <td>257</td> <td>-</td> </tr> <tr> <td>Norms as per consent</td> <td>5.5 – 8.5</td> <td>30</td> <td>250</td> <td>30</td> <td>2100</td> <td>-</td> <td>10</td> </tr> </tbody> </table> <p style="text-align: center;">Aeration Tank: MLSS – 11160 mg/l & MLVSS – 5342 mg/l</p> <p><i>All values are in mg/l except pH</i></p> <ul style="list-style-type: none"> • Analysis results of samples collected from outlet of ETP (sugar unit) & lagoon (sugar unit) indicates compliance w.r.t. stipulated discharge norms. <p><u>Compliance status: Complying</u></p>	Location	pH	BOD	COD	TSS	TDS	SO ₄ ²⁻	Oil & grease	ETP Inlet	5.2	880	1453	202	2820	470	-	ETP Outlet	7.6	02	16	BDL (<10)	668	326	BDL (<5)	Lagoon (Sugar unit)	7.9	06	24	BDL (<10)	852	257	-	Norms as per consent	5.5 – 8.5	30	250	30	2100	-	10
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17., 18., 19. & 20.	<p><u>Recommendation:</u></p> <ul style="list-style-type: none"> • The unit shall install air mixing system in Equalization Tank for proper homogenization of effluent. • The unit shall relocate the oil and skimmer belt at appropriate place to collect the entire Oil & Grease content of the effluent. • The unit shall ensure proper functioning of lime dosing system. • The unit shall operate Primary Clarifier properly to avoid anaerobic condition in the tank. <p><u>Compliance submitted by project proponent: Complied</u></p> <p><u>Factual status observed by CPCB team on recent visit:</u></p> <ul style="list-style-type: none"> • The unit has installed a perforated pipeline inside the equalization tank and connected it with a blower (capacity 170 m³/hr) as an air mixing system. • The unit has relocated the oil & grease skimmer equipment at the appropriate location at ETP inlet and same was found operational. • Lime dosing system (with proper mixing arrangement) has been installed at ETP inlet after oil & grease tank and same was found operational. • There was no anaerobic condition observed in the Primary clarifier as there was no foul smell emanating from it which indicates that Primary clarifier was being operated properly. <p><u>Compliance status: Complying</u></p>																																								
22.	<p><u>Recommendation:</u></p> <ul style="list-style-type: none"> • The unit has not yet prepared a comprehensive irrigation management plan validated by SPCB/ Agricultural Universities for utilizing the treated effluent in irrigation as per notified treated irrigation protocol for sugar industries. <p><u>Compliance submitted by project proponent: Complied</u></p>																																								

	<p><u>Factual status observed by CPCB team on recent visit:</u></p> <ul style="list-style-type: none"> Unit has submitted irrigation management plan prepared by NSI, Kanpur dated 9-10 April, 2024. The report stated that the unit has adequate land area for utilization of treated effluent generated @ 200 litres/ton of cane crushed. <p>Copy of irrigation management plan is attached at Annexure – 11</p> <p><u>Compliance status:</u> Complying</p>														
23.	<p><u>Recommendation:</u></p> <ul style="list-style-type: none"> The unit shall maintain the proper record of ash disposal in low lying area. <p><u>Compliance submitted by project proponent:</u> <i>Complied</i></p> <p><u>Factual status observed by CPCB team on recent visit:</u></p> <ul style="list-style-type: none"> The unit has maintained proper record of ash disposal and provided logbooks of the same. (Refer Annexure – 12) Logbooks were collected by the inspection team regarding Ash generation and disposal for duration from 01.02.2025 – 30.04.2024. The details are as follows: <table border="1"> <thead> <tr> <th>Months</th> <th>Bagasse Consumption (MT)</th> <th>Ash Generation (MT)</th> <th>Ash Disposal at Low land RBNS area (MT)</th> </tr> </thead> <tbody> <tr> <td>Feb – 2025</td> <td>53126.3</td> <td>919.37</td> <td rowspan="3">As per data provided by the unit, it has disposed entire quantity of boiler ash into its low lying land area.</td> </tr> <tr> <td>March – 2025 (upto 25th)</td> <td>46265.7</td> <td>804.93</td> </tr> <tr> <td>Total</td> <td>99392</td> <td>1724.3</td> </tr> </tbody> </table> <p><u>Compliance status:</u> Complying</p>	Months	Bagasse Consumption (MT)	Ash Generation (MT)	Ash Disposal at Low land RBNS area (MT)	Feb – 2025	53126.3	919.37	As per data provided by the unit, it has disposed entire quantity of boiler ash into its low lying land area.	March – 2025 (upto 25 th)	46265.7	804.93	Total	99392	1724.3
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24.	<p><u>Recommendation:</u></p> <ul style="list-style-type: none"> The unit must ensure regular water sprinkling in and around the boiler and near bagasse storage area of the unit to minimize the dust dispersion in the ambient environment. <p><u>Compliance submitted by project proponent:</u> <i>Complied</i></p> <p><u>Factual status observed by CPCB team on recent visit:</u></p> <ul style="list-style-type: none"> Unit has installed manual water sprinklers around bagasse storage area and manual water sprinkling is carried out around the boiler area through tankers to ensure regular water sprinkling to minimize the dust dispersion in the ambient environment. <p><u>Compliance status:</u> Complying</p>														

4. STATUS OF OTHER RECOMMENDATIONS MADE IN CPCB'S INSPECTION REPORT DATED 22.07.2024

RECOMMENDATIONS MADE IN CPCB'S INSPECTION REPORT DATED 22.07.2024	CURRENT STATUS
1. Unit shall install flow meter with totalizer at the new Borewell (distillery unit) when it becomes functional and maintain logbook regarding groundwater withdrawal on daily basis.	Unit has installed flow meter with totalizer at the new Borewell (distillery unit) and maintained logbook regarding groundwater withdrawal on daily basis. Status: Complied

2. Unit shall clear up all the ready bio-compost stored in compost yard at the earliest and submit photographic evidence to CPCB & UKPCB.	Unit has cleared up all the ready bio-compost stored in compost yard. Status: Complied
3. The unit shall ensure proper functioning of chemical dosing system in effluent treatment plant of sugar unit.	The unit has ensured proper functioning of chemical dosing system in effluent treatment plant of sugar unit. Status: Complied
4. Unit shall submit the “Adequacy and performance assessment report of ZLD scheme for molasses based distillery”, clearly mentioning about the details of 02 nos. of dryers.	Unit has provided the “Adequacy and performance assessment report of ZLD scheme for molasses based distillery”, clearly mentioning about the details of 02 nos. of dryers. Status: Complied
5. Unit shall install flow meter with totalizer at the inlet line of all three STPs and maintain logbooks for quantity of sewage fed into STPs and treated sewage used in gardening.	Unit has installed flow meter with totalizer at the inlet line of all three STPs and maintained logbooks for quantity of sewage fed into STPs and treated sewage used in gardening. Status: Complied
6. Unit shall implement the recommendations made in ETP adequacy report prepared by NSI, Kanpur w.r.t installation of MGF & ACF prior to starting its operation.	Unit has implemented the recommendations made in ETP adequacy report prepared by NSI, Kanpur w.r.t installation of MGF & ACF prior to starting its operation. Status: Complied
<p>7. UKPCB shall carry out detailed assessment of groundwater quality including ground water sampling & analysis in and around the unit to ascertain the groundwater contamination, if any, and need for remediation. Depending on such study, detailed remedial action plan be also prepared and executed by UKPCB in time bound manner.</p> <p><u>Remark:</u> UKPCB has carried out assessment of groundwater quality including ground water sampling & analysis in and around the unit through a private agency namely M/s Noida Testing Laboratory during 16.08.2024 – 20.08.2024 (Refer Table 13, S. No. 14)</p> <p>Status: Complied</p>	
8. State Revenue Department, Irrigation Department and SPCB may assess the possibility of laying of closed conduit pipe line on Laksar drain. In case not feasible, they may suggest alternative arrangement to rule out any possibility of discharge of partially treated/untreated effluent into drain.	No information received from State Revenue Department, Irrigation Department and SPCB

5. CONCLUSION

1. Distillery unit is operating on ZLD in compliance with the consent condition.
2. The sugar unit is complying with discharge norms stipulated under the consent issued by UKPCB.
3. The sugar unit is recycling 75.75 % of treated effluent, 21.67 % is used for irrigation and remaining (around 2.6 %) is disposed into laksar drain, which is in line with the consent issued by UKPCB to the sugar unit (condition no. 6.B.a) which states that the treated effluent shall be recycled to the maximum extent and remaining treated effluent after tertiary level treatment shall be used for irrigation purpose/disposal.
4. UKPCB has carried out assessment of groundwater quality including ground water sampling & analysis in and around the unit to ascertain the groundwater contamination, through a private agency namely M/s Noida Testing Laboratory during 16.08.2024 – 20.08.2024. Analysis results indicate that the groundwater samples collected from different locations around the unit found within the permissible limit as per BIS IS 10500:2012, and do not indicate any contamination in groundwater in Laksar region around the unit.
5. Out of 24 recommendations made in CPCB's inspection report dated 22.07.2024; the unit has complied with 23 recommendations, and w.r.t. recommendation no. 1 i.e. laying of the closed conduit pipeline at Laksar drain, the unit has shown inability due to administrative reasons.

6. RECOMMENDATIONS

Project proponent shall ensure continuous compliance with the conditions mentioned in the Consolidated Consent & Authorization (CCA) issued by the UKPCB to its Sugar & Distillery unit.

7. PHOTOGRAPHS

Photographs of Laksar drain	
	
Photo 1: Laksar drain downstream of unit	Photo 2: Laksar drain Akhoda Kalan village
Photographs of Distillery unit	
	
Photo 3: MEE	Photo 4: Dryer and dried powder
	
Photo 5: Distillery Piezowell found sealed with concrete	Photo 6: Distillery borewell (new)
	
Photo 7: Flow meter on distillery borewell	Photo 8: Lagoon/Settling tank of capacity 1925 m ³ for bio-methanated spent wash



Photo 9: Lagoons filled/levelled with ash and covered with brick lining



Photo 10: Bio-composting yard cleared



Photo 11: Boundary wall created near bio-compost yard

Photographs of Sugar unit



Photo 12: Sugar unit Borewell flow meter



Photo 13: ETP inlet channel & bar screen



Photo 14: ETP equalization tank



Photo 15: Oil & Grease skimmer



Photo 16: Lime dosing system



Photo 17: Primary Clarifier



Photo 18: Aeration tank



Photo 19: Secondary clarifier



Photo 20: New Filtration units in ETP (MGF & ACF), and Lagoon sugar unit



Photo 21: Sludge Drying Beds



Photo 22: Water spraying system at bagasse storage yard

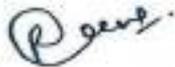
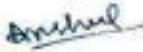


Photo 23: Sulphur Removal System (SRS)

Sewage Treatment Plants (STPs) installed in the industrial complex



8. INSPECTION TEAM

Name of the officials	Designation	Signature
Mrs. Reena Satavan,	Scientist-E, Central Pollution Control Board, Delhi	
Ms. Anshul Kumari	Research Associate-III, Central Pollution Control Board, Delhi	
Mr. Vipin Kumar	Research Associate-III, Central Pollution Control Board, Delhi	
Mr. Ankit Shukla	Senior Research Fellow, Central Pollution Control Board, Delhi	

Date: 09.05.2025


(Dinabandhu Gouda)
Scientist 'F'
Central Pollution Control Board

Item Nos. 06 to 08

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

Original Application No. 530/2023

Anuj Kumar

Applicant

Versus

State of Uttarakhand
& Ors.

Respondent(s)

With

Original Application No. 495/2023

Mohd Amjad & Ors.

Applicant(s)

Versus

State of Uttar Pradesh & Ors.

Respondent(s)

With

Original Application No. 369/2024

Monika (Sarpanch)

Applicant

Versus

State of Uttarakhand & Ors.

Respondent(s)

Date of hearing: 12.02.2025

**CORAM: HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON
HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER**

Applicant: Mr. Prakash Pandey, Adv. for Applicant in OA 530/2023 (Through VC)
Mr. Rahul Khurana, Mr. Hasil Jain, Ms. Farha Khan & Mr. Shaiem Hasan, Advs. for
Applicant in OA 495/2023
Ms. Sweksha Prakash, Adv. for Applicant in OA 369/2024 (Through VC)

Respondent: Mr. Manish Singhvi, Senior Advocate with Mr. Manish Jain, Mr.
Jugul Kishore Gupta & Mr. Vikash Kumar Verma, Advs. for R - 7 & 8
Mr. Mukesh Verma & Ms. Vatsala Tripathi, Advs. for UKPCB
(Through VC)
Mr. Bhupendra Pratap Singh, Mr. Nakul Nirwan & Mr. Anurag

Kumar, Advs. for UPPCB
Mr. Vikrant Pachnanda, Adv. for MoEF & CC in OA 530/2023
Mr. Saurabh Balwani, Adv. for CPCB in OA 530/2023 (Through VC)
Ms. Suman Arora, Adv. for CPCB in OA 369/2024 (Through VC)

ORDER

1. In this Original Application, the applicant has alleged violation of environmental norms by R-7 M/s Rai Bahadur Narayan Singh Sugar Mills.
2. The CPCB in its report dated 22.07.2024 had made recommendations on as many as 24 issues by noticing the compliance status by the project proponent.
3. Respondent No. 7 & 8 have filed the reply dated 04.02.2025 disclosing that it has complied with all the 24 recommendations of the CPCB. Hence, the CPCB is directed to verify the compliance status by the Respondent no. 7 & 8.
4. On perusal of the reply dated 04.02.2025 filed by Respondent no. 7 & 8, we find that at serial no. 8 in the chart therein it is stated that no effluents were discharged by the distillery. The unit has complied with Zero Liquid Discharge (ZLD) norms as per CPCB but, in paragraph 9 of the reply it is stated that fresh agreements have been executed with 98 farmers and the answering respondent is supplying treated water for irrigation to nearby agricultural land (total 102.22 hectares). Hence, Respondents No. 7 & 8 are required to explain if they are fully compliant with ZLD norms, from where they are supplying the treated water to the farmer and if the treated water is meeting the prescribed standard for irrigation. Respondents No. 7 & 8 are also required to disclose if the Sulphur Recovery System (SRS) has been installed and if yes, the efficacy of its working.

5. Learned Counsel for the applicant submits that the reply filed by Respondents No. 7 & 8 has been uploaded only on 10.02.2025, and he did not have the opportunity to examine the same and obtain instructions in respect thereof. He is granted four weeks to file objection to the reply of the Respondents No. 7 & 8.

6. The original applicant in OA No. 369/2024 has sent a communication that he wants to withdraw the OA. Learned Counsel for the applicant in 369/2024 submits that she does not have any such instructions. She has prayed for time to obtain instruction in this regard.

7. List on 20.05.2025.

Prakash Shrivastava, CP

Sudhir Agarwal, JM

Dr. A. Senthil Vel, EM

February 12, 2025
O.A. No. 530/2023,
O.A. No. 495/2023
and O.A No. 369/2024..



HEAD OFFICE
Uttarakhand Pollution Control Board
"Gauradevi Paryavaran Bhawan"
46B, IT Park, Sahasradhara Road, Dehradun
E-mail: mpucb@vsnl.com, Phone No. 0135-2607092

Letter No.: UKPCB/HO/Con-R-95/2024/ 823

Date: 27/08.2024
REGD. POST

To,

M/S Rai Bahadur Narayan Singh Sugar Mills Ltd.,
(Distillery Unit)
Laksar, Distt. Haridwar
(Uttarakhand)

Subject: Consolidated Consent to Operate and Authorisation hereinafter referred to as the CCA (Consolidated Consent & Authorization) Renewal under Section- 25 of the "Water (Prevention & Control of Pollution) Act, 1974" and under Section- 21 of the "Air (Prevention & Control of Pollution) Act, 1981" and Authorization under "Rule - 6(2)" of the "Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016" notified under "Environment (Protection) Act, 1986" as applicable (to be referred hereinafter as Water Act, Air Act and HW Rules respectively).

CAF ID: 9158 Application No. 5445375
CCA (Renewal) Date:- 01.03.2024

Consolidated Consent and Authorization (CCA):

CCA is hereby granted to M/S Rai Bahadur Narayan Singh Sugar Mills Ltd. (Distillery Unit) located at Laksar, Distt. Haridwar (Uttarakhand) subject to the provisions of the Water (Prevention and Control of Pollution) Act, 1974; the Air (Prevention and Control of Pollution) Act, 1981 and the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the orders that may be made further and subject to following terms and conditions:

1. This CCA is granted for the period up to 31.03.2028, under Section-25 of the Water (Prevention & Control of Pollution) Act, 1974, as amended.
2. This CCA is granted for the period up to 31.03.2028, under Section-21 of the Air (Prevention & Control of Pollution) Act, 1981, as amended.
3. This CCA is granted for the period of 31.03.2028, under the Hazardous and Other Waste (Management & transboundary Movement) Rules, 2016 as amended.
4. Production Capacity:

S. No.	Declared by the industry		Permitted by Board	
	Raw Material/ Feedstock	Finished Product (KLD)	Raw Material/ Feedstock (M ³ /Day)	Finished Product (KLD)
1.	C-Heavy/ B-Heavy Molasses- 372 M ³ /Day	Ethanol/ENA/RS-60 KLD & Etanol-60 KLD	C-Heavy/ B-Heavy Molasses- 372 M ³ /Day	Ethanol/ENA/RS-60 KLD & Etanol-60 KLD

5. Production Process Infrastructure:

S.no.	Declared by the unit				Permitted by the Board
	Number of fermenters	Capacity of fermenters (M ³)	Type of fermentation technology adopted	Type of Distillation	
1.	07	400 M ³ each	Feed Batch	Molasses based	As declared by Unit.

Clean Environment and Healthy Life Style
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Molasses storage infrastructures:

Declared by the unit			Permitted by SPCB
Capacity	No. of tanks	No. of lined pits*	
60000 Qtl. & 85000 Qtl.	02 Nos.	NA	60000 Qtl. & 85000 Qtl. (02 Nos.)

*The unit shall not store molasses in *Kaccha* unlined pits.

6. Water Conservation:**A. Fresh water Consumption**

- The unit shall obtain permission / NOC from State or Central Ground Water Authority for Groundwater abstraction and shall comply with the conditions mentioned in the NOC.
- Industry shall install separate sealed, calibrated Electro Magnetic Flow meters with flow totalizer at all water abstraction sources, utilization lines- process, domestic and boiler.
- The industry shall maintain duly signed logbook of fresh water consumption and utilization.
- The specific water consumption shall not exceed values mentioned below as per consented product type.

Category	Specific Water Consumption not to exceed
B-heavy / C-Heavy	8-10KL/KL of product
Cane syrup/ sugar cane juice	6-8KL/KL of product

	Declared by the Industry	Permitted by NOC issued by CGWA	CGWA conditions
No. of bore wells	01	01	To be complied.
Daily quantity of water to be abstracted (KLD)	250 KLD	500 KLD	

B. Effluent generation, treatment and disposal:

- The quantity of maximum specific effluent generation shall be as specified below:

Category	Specific spent wash generation, not to exceed
B-heavy / C-Heavy	6-8KL/KL of product
Cane syrup/ sugar cane juice	4-6KL/KL of product

- The quantity of maximum daily effluent generation & discharge should not be more than the following:

S.No.	Kind of Effluent	Maximum daily generation	Maximum daily discharge, (KLD)	Treatment Facility and Discharge point
1	Domestic	15 KLD		Septic Tank & Soak Pits.
2	Industrial (Spent wash)	720 M ³ /Day	Zero Liquid Discharge (ZLD)	

- Arrangement should be made for collection of water used in process and domestic effluent separately in closed water supply system. It should be ensured that domestic effluent should not be discharged in the storm water drain.
- The domestic effluent should be treated in sewage treatment plant (STP) and it should be in conformity with the norms of treated effluent as stipulated in E.P. Rules, 1986 as amended.
- The unit shall identify recipient drains/ rivulets and their w/s & d/s locations in consultation with SPCB for monthly monitoring by industry to ensure ZLD from distilleries within 30 days. The monitoring report shall be submitted to CPCB on monthly basis.

S.No.	Name of recipient drain/rivulets	Latitude	Longitude	Name of the recipient river
1.	w/s of Laksar drain	28°44'59"N	78°01'40"E	Banganga
2.	d/s of Laksar drain	29°44'36"N	78°01'53"E	Banganga

- vi. The industry shall maintain Zero Liquid Discharge (ZLD). ZLD refers to installation of facilities and system which will enable industrial effluent (all streams) for absolute recycling of or re-use in to industrial processes and converting solute (dissolved organic and in-organic compounds / salts) into residue in solid form by adopting method such as concentration/evaporation/drying. ZLD will be recognized and certified based on two broad parameters that is, water consumption versus waste water reused or recycled (permeate) and correspondingly solids recovered (percent total dissolved / suspended solids in effluents).

C. Effluent Management Infrastructure:

Bio-digester					
S.no.	No. of digesters	Designed Capacity (m3)	Sludge generation from digester	Method of disposal/ utilization of sludge	
1.	03	10000 x 02 nos. 7500 x 01 nos.	--	Spray Dryers	
Multi Effect Evaporator (MEE)					
S.No.	Nos. of MEE	Design Capacity (m3)	Type of technology of MEE (stages)	Mass flow meter installed at inlet and outlet of MEE	
1.	02 Nos.	5028 Sq. Meter	Multi-Effect Evaporation	Yes.	
Condensate Polishing Unit (CPU):					
** For treatment of MEE condensate and other low-strength effluent					
S.No.	Design Capacity (m3)	Type of technology of CPU	Sources of effluent coming into CPU with Quantity	Quantity of treated effluent from CPU and its utilization	Quantity of CPU sludge & its disposal mechanism
1.	1050	USAB	Condensate of MEE	485 KLD Reused in cooling and processes.	Sludge Drying Bed. To be used as manure.
Reverse Osmosis (RO) system					
S.No.	Design Capacity (m3)	No. of stages	Quantity of RO permeate (m3) & purpose of utilization	Quantity of RO reject (m3) & disposal mechanism	

- All process and non-process effluents such as Spent lees, Process condensates, Boiler RO reject, CT blowdown, Softener/DM plant backwash, Pump gland cooling water etc. should be treated through CPU and recycled back in the process.
- The unit shall install mass flowmeters with totalizers at inlet and outlet of Multi Effect Evaporator (MEE) (concentrate) and shall connect the same with CPCB and Uttarakhand Pollution Control Board's servers.
- The unit shall install electromagnetic flowmeters with totalizer at CPU inlet & outlet and at water recirculation points like make up water for cooling towers & in process. The unit shall have separate energy meter for ETP/CPU and maintain the duly signed logbook of the same.
- The unit shall maintain duly signed logbooks of spent wash generation, MEE feed, MEE condensate, MEE concentrate, CPU inlet & outlet, cooling tower make up water and treated effluent reused in process.
- The unit shall ensure proper marking/and colour coding of all the pipelines carrying industrial effluent accordingly.

Distilleries opting for Spray Dryer;

- Minimum Solid % in feed for dryer shall be 40-45%.
- Maximum storage of Bio-methanated spent wash utilized in dryer shall strictly be restricted to seven days (07) equivalent of concentrated Bio-methanated spent wash generated. Excess storage facilities beyond this shall be levelled and dismantled.
- Unit shall dispose the spent wash through Bio-methanation followed by MEE and concentrated spent wash will be dried through Spray Dryers- 02 Nos. and the powder will be used as Potash Rich manure (45 TPD each Dryer).
- The unit shall collect powder produced from dryer in common silo and should be disposed of as fertilizer.

D. Domestic sewage

- The domestic effluent should be treated separately in sewage treatment plant/ soak pit so that it should be in conformity with the following norms.
Trade effluent and domestic sewage shall be treated separately and also to be monitored for compliance w.r.t. notified norms separately. However, Single outlet can be provided after mixing for outside disposal.
- Industry shall install the flow meter at STP inlet and outlet and maintain the daily logbook.
- Industry shall explore the possibility to recycle the treated used water shall be utilised in gardening, irrigation, industrial utility and toilet flushing to minimise the fresh water consumption up to 20 % per year.

7. Air pollution mitigation:

- The industry shall use following fuel and install air pollution control devices (APCD) of adequate capacity to comply with the following:

S. No.	Equipment	Fuel used	Stack height (m)	Air Pollution Control Device (APCD)	Stack Emission standards
I.	Spray Dryer (45 TPD)	Bagasse-168 TPD	40	Individual Wet Scrubber	PM-150 mg/N M ³
II.	Spray Dryer (45 TPD)	Biogas-1500 M ³ /day			

- The industry shall operate in a manner so that all emissions be emitted through designated chimney/stack only. Porthole, platform and stairs shall be provided as per prescribed guidelines for stack emission monitoring.
- The APCS will be maintained and operated in such a manner that emissions always conform to the standard laid down under the E.P Act 1986 as amended. The ash generated from the Boiler shall be disposed of properly in such a manner that not affect the environment adversely.
- The unit shall install Online Stack Emission Monitoring System (OEMS) for PM and ensure with its connectivity (24x7) to CPCB server and Uttarakhand Pollution Control Board's dashboard.
- The unit shall submit manual stack emission monitoring report and ambient air quality report on quarterly basis during operation of the plant.
- Water shall be sprinkled on the roads and premises for suppression of road dust.
- The solid waste namely boiler ash shall be disposed of properly and ensure that there is no fugitive emission from their transportation, storage and handling.
- The industry shall provide ports in the chimney/stack and facilities such as ladder, platform etc. as per requirement for monitoring the air emissions and the same shall be open for inspection and use at all time) by the Board's staff, the chimney/stack attached to various sources of emission shall be designated by number such as S-1, S-2 etc. and these shall be painted/ displayed to facilitate identification.

8. Noise Pollution Mitigation:

- Noise from the D.G. Set and other source(s) should be controlled by providing an acoustic enclosure as is required for meeting the ambient noise standards for night and day time as prescribed for respective areas/zones (Industrial and Commercial) which are as follows: -

Standards for Noise level in db.(A) L_{eq}			
Industrial Area		Commercial Area	
Day	Night	Day	Night
75	70	65	55

Day time: from 6.00 a.m. to 10.00 p.m., Night time: from 10.00 p.m. to 6.00 a.m.

- ii. The industry shall take adequate measures to control of noise from its own source so as to comply with the standards as may be applicable.
- iii. The industry shall provide acoustics enclosure on DG sets as per Environment (Protection) Rules, 1986.

9. Conditions under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016: -

Hazardous Waste Management:

- i. Number of authorization and date of issue: As above.
- ii. Reference of application (No. and date) : As above.
- iii. The Factory Manager of M/S Rai Bahadur Narayan Singh Sugar Mills Ltd. is hereby granted an authorization for generation, collection, reception, storage, transport, reuse, recycling, recovery, pre-processing, co-processing, utilization, treatment, disposal or any other use of hazardous or other wastes or both on the premises situated at Laksar, District Haridwar (Uttarakhand).

Details of Authorization

Sl. No.	Category of Hazardous Waste as per the Schedules I, II and III of these rules	Authorised mode of disposal or recycling or utilisation or co-processing, etc.	Quantity (ton/annum)
--NA--			

- iv. The authorization shall be valid for a period ofNA.....
- v. The authorization is subject to the following general and specific conditions (Please specify any conditions that need to be imposed over and above general conditions, if any):

A. General conditions of authorization:

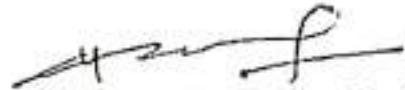
1. The authorized person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.
2. The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the State Pollution Control Board.
3. The person authorized shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorization.
4. Any unauthorized change in personnel, equipment or working conditions as mentioned in the application by the person authorized shall constitute a breach of his authorization.
5. The person authorized shall implement Emergency Response Procedure (ERP) for which this authorization is being granted considering all site-specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time;
6. The person authorized shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty"
7. It is the duty of the authorized person to take prior permission of the State Pollution Control Board to close down the facility.
8. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.

9. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
10. The hazardous and other waste which gets generated during recycling or reuse or recovery or pre-processing or utilization of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorization.
11. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
12. An application for the renewal of an authorization shall be made as laid down under these Rules.
13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.
14. Annual return shall be filed by June 30th for the period ensuring 31st March of the year.
15. The occupier shall strictly comply with condition of prior environmental clearance accorded by MoEF & CC vide letter File no. IA-J-110011/618/2010-IA II(I) dated 27-08-2021 and shall submit regular compliance of the same.
16. The occupier shall submit water Balance & material Balance within one month of start of operation and same shall be communicated in each season to the Board's offices.
17. The occupier shall strictly comply with provisions of Water Act, Air Act, E(P) Act & Rules made thereunder and directions issued from time to time.

General Conditions

1. Environmental management system:
 - i. Industry shall setup the environmental management cell including unit head, purchase/store manager, process operation head, ETP in charge to effectively monitoring of environmental compliance
 - ii. Industry shall setup the environmental laboratory for testing of minimum wastewater quality parameters like pH, TSS, BOD, COD, MLSS and DO to effectively monitoring of ETP control parameters and ETP discharge norms.
2. The applicant shall get analyses the samples of effluent/emission/hazardous wastes at least once in a three month from the laboratory recognized by the MoEF&CC and shall report to the SPCB.
3. The applicant shall however, not without the prior consent of the Board bring into use any new or altered outlet for the discharge of effluent or gases emission or sewage waste from the unit.
4. Treated waste water and domestic waste water shall be disposed jointly at one disposal point. The applicant shall provide discharge measurement equipment at final disposal point.
5. The applicant shall strictly comply with conditions of this CCA and submit compliance report of stipulated conditions with 30 days of receipt of this CCA. If, at any point of time, it is found that the industry is not complying with stipulated conditions or any further direction/instruction issued by the Board, legal action shall be initiated against the applicant.
6. The applicant shall maintain good housekeeping. All valves/pipes/sewer/drains etc. must be leak-proof.
7. The industry shall provide uninterrupted entry to this STP's/ETP's inlet and outlet points, Air Pollution Control equipment and stack for smooth sampling/monitoring of efficiency of pollution control measures.
8. The industry shall provide "Inspection Book" at the time of inspection to the Board's officials. Whenever due to any accident or other unforeseen act or event, such emission occurs or is apprehended to occur in excess of standards laid down, such information shall be reported to the Board's offices and all other concerned offices. In case of failure of pollution control equipment, the production process connected to it shall be stopped with immediate effect
9. In case of any damage to the agriculture productivity, human habitation etc. by the operation of industry, it shall be imperative to stop production in the industry with immediate effect and such information shall be reported to Board's offices. The industry shall be liable to pay compensation also in such cases as decided by the Competent Authority.
10. The applicant shall apply before the 60 days of expiry of CCA or any change in production types/production capacity/manufacturing process/capacity enhancement etc. or any change in effluent discharge point or emission point.
11. The Board reserves the right to revoke/add/modify any stipulated conditions issued along with CCA, as may be necessary.

12. Any unauthorized change in personnel, equipment as working condition as mentioned in the application by the person authorized shall constitute a breach of his authorization.
13. It is the duty of the authorized person to take prior permission of the Board to close down the facility.
14. The authorization is valid for temporary storage of Hazardous Waste within premises only.
15. It is duty of the authorized person to take prior permission of this Board to close and clean up the facility for treatment, storage and disposal of hazardous waste.
16. Industry shall submit the latest copy of Audit Balance sheet/C.A. Certificate (Fixed Assets + Current Assets-Current Liabilities) so that the Consent fee payable by the industry may be verified.
17. Generated hazardous waste shall be stored temporarily in the factory premises and disposed of through authorized TSDF after obtaining the authorization from the Board
18. Unit shall develop green belt as per the protocol of Central Pollution Control Board.
19. In case of non-compliance of CCA condition(s) Bank Guarantee No.006081G160000010 submitted by the unit will be forfeited without further information.
20. The industry shall comply with the provisions of Environment (Protection) Amendment, Rules 2018 notified by MoEF&CC by Notification no 49 Dt. 25.01.2018, Environment (Protection) Act 1986, Water (Prevention and Control of Pollution) Act, 1974 as amended, Air (Prevention and Control of Pollution) Act, 1981 as amended, Plastic Waste Management Rule 2016, E-Waste (Management and Transboundary Movement) Rules 2016 (whichever is applicable).
21. If closure order is issued by CPCB or SPCB against the unit then CCA will remain suspended during the closure period. After ensuring the compliance and after revocation of the closure order, the CCA will automatically be effective from the date of issuance of the closure revocation/modification order with additional conditions mentioned in the closure revocation/modification order.



Dr. Parag Madhukar Dhakate
Member Secretary

Copy to:

Regional Officer, Uttarakhand Pollution Control Board, Regional Office, Roorkee (Haridwar) for information and compliance.

Member Secretary

भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन विभाग,
केंद्रीय भूमि जल प्राधिकरण
GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI
DEPARTMENT OF WATER RESOURCES,
RIVER DEVELOPMENT & GANGA REJUVENATION
CENTRAL GROUND WATER AUTHORITY



सत्यमेव जयते



भूजल निकासी हेतु अनापत्ति प्रमाण पत्र
NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION

PROJECT NAME M/S RAI BAHADUR NARAIN SINGH SUGAR MILLS LTD. (DISTILLERY DIVISION)	
PROJECT ADDRESS LAKSAR	PIN CODE 247663
STATE UTTARAKHAND	DISTRICT HARIDWAR
TOWN/BLOCK LAKSAR	
COMMUNICATION ADDRESS Laksar,Haridwar	
ADDRESS OF CGWB REGIONAL OFFICE 419-A, Kanwali Road, Baluwala, Near Urja Bhawan, Dehradun - 248006, Uttarakhand	
1. NOC NO. NOC/IND/UK/2024/1388/R-1/1	2. DATE OF ISSUANCE 21/03/2025
3. APPLICATION NO. IND/UK/2024/1388/R-1	4. APPLICATION TYPE Industry
5. PROJECT STATUS Existing Project	6. NOC TYPE Renew
7. VALID FROM 26/11/2024	8. VALID UP TO 25/11/2027
9. WATER QUALITY TYPE Fresh Water	10. AREA TYPE CATEGORY Safe (GWRE - 2024)

11. Ground Water Abstraction Permitted

GW Abstraction		Dewatering		Total	
m ³ /day	m ³ /year	m ³ /day	m ³ /year	m ³ /day	m ³ /year
400.00	146000.00	0.00	0.00	400.00	146000.00

12. Details of Ground Water Abstraction /Dewatering Structures

EXISTING 1					PROPOSED 0					TOTAL 1				
DW	DCB	BW	TW	Pu	DW	DCB	BW	TW	Pu	DW	DCB	BW	TW	Pu
0	0	1	0	0	0	0	0	0	0	0	0	1	0	0

*DW-Dug Well; DCB-Dug-cum-Bore Well; BW-Bore Well; TW-Tube Well; Pu Pumps;

Validity of this NOC shall be subject to mandatory compliance of the following conditions:

Phase I (within 30 days)

1. Installation of tamper proof digital water flow meter with telemetry on all the abstraction structure(s) is mandatory for all users seeking No Objection Certificate. Intimation regarding their installation shall be updated in Self-Compliance Module (Phase-I) of BhuNeer APP portal within 30 days of grant of No Objection Certificate.

Phase II (after 11 months)

1. Proponents shall mandatorily get water flow meter calibrated from an authorized agency once in a year.
2. Construction of purpose-built observation wells (piezometers) for ground water level monitoring is mandatory as per Section 14 of Guidelines. Water level data shall be made available to CGWA through web portal. Detailed guidelines for construction of piezometers are given in Annexure-II of the notified guidelines.

3. Proponents shall monitor quality of ground water from all the abstraction structure(s) once in a year. Water samples from bore wells/ tube wells / dug wells shall be collected during April/May every year and analyzed in NABL accredited or Govt. approved laboratories for basic parameters (cations and anions), heavy metals, pesticides/ organic compounds etc. Water quality data shall be made available to CGWA through the web portal.

Phase III (Biennial)

1. Industries shall undertake Biennial water audit through certified water auditors and submit audit reports within three months of completion of the same to CGWA. All such industries shall be required to reduce their ground water use by at least 20% over the next three years through appropriate means.

All the above-mentioned mandatory compliance conditions are to be filed online in BHUNEER APP (<https://cgwa-bhuneer.mowr.gov.in>) timely.

General Conditions:

1. Application for renewal can be submitted online from 90 days before the expiry of NOC. Ground water withdrawal, if any, after expiry of NOC shall be illegal & liable for legal action as per provisions of Environment (Protection) Act, 1986 and amendment thereto, if any.
2. This NOC is subject to prevailing Central/State Government rules/laws/norms or Court orders related to construction of tube well/ground water abstraction structure / recharge or conservation structure/discharge of effluents or any such matter as applicable.
3. This NOC is being issued without any prejudice to the directions of the Hon'ble NGT/court orders in cases related to ground water or any other related matters.
4. No additional ground water abstraction and/or de-watering structures shall be constructed for this purpose without prior approval of the Central Ground Water Authority (CGWA).
5. The proponent shall seek prior permission from CGWA for any increase in quantum of groundwater abstraction as permitted in NOC.
6. Proponents shall install roof top rain water harvesting in the premise as per the existing building bye laws.
7. Proponents, who have installed/constructed rain water harvesting and artificial recharge structures shall continue to regularly maintain the water conservation structures.
8. The project proponent shall take all necessary measures to prevent contamination of ground water in the premises failing which the firm shall be responsible for any consequences arising thereupon.
9. Industries which are likely to cause ground water pollution, e.g. Tanning, Slaughter Houses, Dye, Chemical/ Petrochemical, Coal washeries, pharmaceutical, other hazardous units etc. (as per CPCB list), no recharge measures shall be taken up by such firms inside the plant premises. The runoff generated from the rooftop shall be stored and put to beneficial use by the firm. The firm need to undertake necessary well head protection measures to ensure prevention of ground water pollution as per Annexure III of the notified guidelines
10. Wherever feasible, requirement of water for greenbelt (horticulture) shall be met from recycled / treated waste water.
11. Wherever the NOC is for abstraction of saline water and the existing wells (s) is /are yielding fresh water, the same shall be sealed and new tubewell(s) tapping saline water zone shall be constructed within 3 months of the issuance of NOC. The firm shall also ensure safe disposal of saline residue, if any.
12. Unexpected variations in inflow of ground water into the mine pit, if any, shall be reported to the concerned Regional Director, Central Ground Water Board.
13. This NOC does not absolve the proponents of their obligation / requirement to obtain other statutory and administrative clearances from appropriate authorities.
14. This NOC does not imply that other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would consider the project on merits and take decisions independently of the NOC.
15. In case of change of ownership, new owner of the industry will have to apply for incorporation of necessary changes in the No Objection Certificate with documentary proof within 6 months of taking over possession of the premises.
16. In case of new infrastructure projects having ground water abstraction of more than 20 m³/day, the firm/entity shall ensure implementation of dual water supply system in the projects.
17. In case of infrastructure projects, paved/parking area must be covered with interlocking/perforated tiles or other suitable measures to ensure groundwater infiltration/harvesting.

18. In case of coal and other base metal mining projects, the project proponent shall use the advance dewatering technology (by construction of series of dewatering abstraction structures) to avoid contamination of surface water.

19. In the self-compliance report, the PP shall submit details of Drilling Agency/ Agencies, which has/ have constructed BW(s)/ TW(s) along with undertaking to the effect that all necessary measures have been taken as per directions of Hon'ble Supreme Court provided in Annexure-VII of guidelines dated 24.09.2020 in respect of abandoned/ failed BW(s)/ TW(s)/Piezometer(s), if any. The PP is advised to engage registered drilling agency/agencies. In the event of any mishap/ unfortunate incident due to negligence in taking measures for prevention of accident due to falling in Bore Well, both PP and concerned drilling agency shall jointly be held responsible and penal action as per extant Government rules shall be taken.

20. Non-compliance of the conditions mentioned above is likely to result in the cancellation of NOC and legal action against the proponent. In case of violation of any NOC conditions, the applicant shall be liable to pay the penalties as per Section 16 of Guidelines



HEAD OFFICE
Uttarakhand Pollution Control Board
"Gauradevi Paryavaran Bhawan"
46B, IT Park, Sahasradhara Road, Dehradun
E-mail : msukpcb@yahoo.com, Phone No.-0135-2607092

Letter No.: UKPCB/HO/Con-R-4(Vol.-II)/2024/ 824

Date: 27/08.2024
Regd. Post

To,
R.B.N.S. Sugar Mills Ltd.,
Laksar, District Haridwar (Uttarakhand)

Consolidated Consent to Operate and Authorization hereinafter referred to as the CCA (Consolidated Consent & Authorization) Renewal under Section- 25 of the "Water (Prevention & Control of Pollution) Act., 1974" and under Section- 21 of the "Air (Prevention & Control of Pollution) Act, 1981" and Authorization under "Rule -6(2)" of the "Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016" notified under "Environment (Protection) Act, 1986" as applicable (to be referred hereinafter as Water Act, Air Act and HW Rules respectively).

CAF ID - 13060	Application ID-5446498
CCA (Renewal)	Date: 29.02.2024

CCA is hereby granted to M/s. R.B.N.S. Sugar Mills Ltd., located at Vill.- Laksar (Latitude $29^{\circ}44'47.82''N$ Longitudes $78^{\circ}01'45.51''E$) subject to the provisions of the Water Act, Air Act and Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the orders that may be made further and subject to following terms and conditions: -

1. This CCA is granted for the period up to 31.03.2029 from the date of issuance of this letter, under Section-25 of the "Water (Prevention & Control of Pollution) Act, 1974.
2. This CCA is granted for the period up to 31.03.2029 from the date of issuance of this letter, under Section-21 of the "Air (Prevention & Control of Pollution) Act, 1981.
3. This CCA is granted for the period up to 31.03.2029 from the date of issuance of this letter under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016" notified under "Environment (Protection) Act, 1986.

4. Production capacity:

S. No.	Type of Sugar Industry	Production Capacity & Co-generation capacity	Cane crushing capacity (in TCD)	Permitted by the Board
1.	Sugar with co-generation	Sugar:1000 MT/Day Co-gen:30 MW	10000 TCD	Sugar:1000 MT/Day Co-gen: 30 MW

5. By- Product if any with capacity:

Name of By Product	Unit Name	License Product Capacity	Install Product Capacity
C-Heavy Molasses	MT/ Day	450 MT/day	450 MT/day
B- Heavy Molasses	MT/Day	578 MT/day	578 MT/day
Bagasse	MT/ Day	2850 MT/day	2850 MT/day
Press Mud	MT/ Day	559 MT/day	559 MT/day

6. Water conservation:

A. Fresh water consumption:

- Categorization of existing groundwater area: Safe.
- Status of NOC from CGWA/SGWB: Applied.
- Validity of NOC:
- Details of Artificial recharge system/rain water harvesting unit installed with capacity-NA
- Details of piezometer installed i.e., numbers with coordinates-1Nos. (29.4444.5"N & 78.0156.1"E).
- Industry shall install sealed and calibrated flow meters at fresh water abstraction and consumption points (process & domestic) and maintain the logbooks for same.
- Maximum allowable fresh water consumption based on applicable specified process category

S. N.	Sources of fresh water	Nos. with daily abstraction capacity	Applied quantity (KLD)	Max. Permitted abstraction quantity (KLD)	Status of flow meter installed	
1.	Borewell	BW	594 KLD	---	594 M ³ /Day	Yes

S. No.	Type of Sugar Industry	Fresh Water Consumption	
		Industrial (L/T of Cane Crushed)	
1.	Standalone sugar	230 Litre /Tonnes of Cane crushed.	
2.	Sugar with co-generation	<100 Litre /Tonnes of Cane crushed.	
3.	Refinery	<80 Litre /Tonnes of Cane crushed.	
4.	Refinery with co-generation	<100 Litre /Tonnes of Cane crushed.	

B. Effluent generation, treatment and disposal: -

S.No.	Kind of Effluent	Maximum daily discharge, KLD	Treatment Facility and Discharge point
1	Domestic	30 KLD	STP (15 KLD, 15 KLD & 15 KLD jointly for sugar & Distillery unit)
2	Industrial	1050 KLD	ETP

- The specific quantity of maximum daily effluent discharge should not be more than the following:

S. No.	Type of Sugar Industry	Maximum daily treated effluent discharge limit* (L/T of cane crushed)
1.	Standalone sugar	---
2.	Sugar with co-generation	192L/T of cane crushed
3.	Refinery	----
4.	Refinery with co-generation	----

*Maximum daily discharge shall be equal to multiplication of total production as per Para 4 and specific effluent discharge as per Para 5 (B-a). The treated effluent shall be recycled to the maximum extent and remaining treated effluent after tertiary level treatment shall be used for irrigation purpose/disposed.

- Industry shall install the Effluent treatment plant consisting of primarily (screen, grit chamber and equalization tank with air blower, neutralization tank, primary clarifier), secondary biological treatment (anaerobic filter tank**), aeration tank and secondary clarifier) and tertiary treatment (MGF/ACF etc.) units with adequate capacity.

**In case no separate sulphate reduction system installed.

- c. The industry shall install flow meters at ETP inlet, outlet and recycling point and maintain the daily logbook for the same.
- d. Industry shall install the OCEMS of parameters pH, BOD, COD, TSS and flow at outlet and connected to CPCB/SPCB servers.
- e. Effluent generated in all the processing houses viz. mill & boiling house, steam generation house, Process Cooling Tower (PCT) blow down/ spray pond i.e. overflow, DM/RO reject/ gland leakages from boiler feed pump, effluent generated from dewatering of sludge and washing of floor and other equipment etc. should be treated in ETP before its disposal* so that it should be according to the norms prescribed as under.

S. No.	Parameter	Standard
1.	pH	5.5 – 8.5
2.	Biological Oxygen Demand (BOD) (mg/l)	30
3.	Chemical Oxygen Demand (COD) (mg/l)	250
4.	Total Suspended Solids (TSS) (mg/l)	30
5.	Total Dissolved Solids (TDS) (mg/l)	2100
6.	Oil & Grease (O&G) (mg/l)	10

In case of stoppage of functioning of ETP, production has to be stopped immediately and this Board has to be intimated by fax/phone/email with a report in this regard to be dispatched immediately.

- f. During no demand period for irrigation, the treated effluent to be stored in a seepage proof lined pond (Lagoon) having 15 days holding capacity only. The treated effluent being pumped for irrigation purpose from lagoon shall comply with the effluent discharge norms prescribed for irrigation vide Gazette dated 14.01.2016 under Schedule I of E(P)Rules,1986. The industry shall install sealed electromagnetic flow meter at outlet point of lagoon and shall maintain record of running hours and treated effluent used for irrigation purpose.
- g. Effluent Treatment Plant to be stabilised one month prior to the start of the crushing season and continue to operate one month after the crushing season.
- h. Proper colour coding of pipe lines and water channels to be implemented for the recycled process water, fresh water and effluent carrying lines.
- i. The industry shall identify recipient drains/rivulets and their u/s & d/s location in consultation with Uttarakhand Pollution Control Board and shall carry out monthly monitoring of identified recipient drains at u/s & d/s location through lab recognized under Environment (P) Act, 1986 and shall submit the analysis report on monthly basis to CPCB and Uttarakhand Pollution Control Board.

S.No.	Name of recipient drain/rivulets	Latitude	Longitude	Quality of effluent of drain	Name of the recipient river
1.	Laksar	29°44'44.4"N	78°01'58.0"E	To be assessed	Banganga

j. Sludge handling system:

S.No.	Sludge handling system (SDB/Centrifuge/Filter press)	Quantity of ETP sludge	Sludge storage area	Sludge disposal mechanism
1	Sludge Bed	30-40 MT	680 M ²	Disposal for farmers

C. Domestic sewage

- i. The domestic effluent should be disposed separately in STP.

- ii. Industry shall install the flow meter at STP inlet and outlet and maintain the daily logbook.
- iii. Industry shall explore the possibility to recycle the treated used water shall be utilized in gardening, irrigation, industrial utility and toilet flushing to minimize the fresh water consumption up to 20 % per year.

Cleaner Technology and waste minimization options:

- i. Directions issued by Uttarakhand Pollution Control Board to all sugar mills to implement the "Charter for Effluent Treatment by Sugar Factories Situated in River Ganga Basin" conditions, which was formulated by CPCB to enforce appropriate technologies for effluent treatment in sugar factories and to comply with the prescribed environmental norms, accomplish desired level of environmental protection and achieve prescribed norms of discharge.
- ii. According to Charter, the industry shall implement a "Model condensate conservation cum Hot & cold Water Management System" focusing on maximum recycling of water. Necessary system comprising cooling towers and underground reservoirs etc. shall be implemented separately for cold re-circulating water and surplus condensate. Unit shall install electromagnetic flow meters at following points:

S.No.	Flow meter installation points at Hot & Cold-water recycling system
1.	Hot water UGR.
2.	Cold water UGR and cooling towers
Hot water- Location of flow meter & its Installation	
1.	Imbibition water at mills
2.	Filter cake wash water at rotary vacuum filter
3.	Sugar melting, pan boiling, molasses conditioning
4.	Wet Scrubber make-up
5.	Boiler make-up in case of low pressure boiler
Cold water- Location of flow meter & its Installation.	
1.	Power turbine cooling
2.	Mills, fibrizer bearing, pumps cooling
3.	Wet scrubber make-up
4.	Cooling tower of co-generation make-up
5.	SO ₂ gas cooling
6.	B and C massecuite cooling
7.	Final molasses cooling

- iii. Recirculation of water employed in SO₂ gas coolers shall be ensured with proper cooling through cooling towers in case of plantation white sugar.
- iv. The industry shall ensure the construction of small pits with smooth cleaned inner surface preferably with ceramic tiles near to boiler feed pumps, condensate pumps. Injection pumps spray pumps and RVF vacuum pumps to collect gland cooling water in their respective pits without any contamination.
- v. The industry shall implement dry cleaning of factory floors etc. using bagasse instead of wet cleaning using water.
- vi. The industry shall provide covered conveyor to transfer bagasse by the sugar factories to prevent floating bagasse particles in ambient air.
- vii. Re-circulation of cooling water used for cooling B and C- massecuites with proper cooling through cooling towers arrangement rather drawing fresh water shall be adopted.
- viii. Minimum quantity of wash water to be applied at centrifugals for B and C massecuite curing to minimize loss of sugar in molasses and to control steam consumption.
- ix. The industry shall install CPU (Condensate Polishing Unit) to use surplus condensate for use

as make-up water at cogeneration cooling tower & boiler feed water (for low/medium pressure boilers) and for use as make-up water at cogeneration cooling tower (for high pressure boilers).

- x. The industry shall install membrane based (2-stage) or other suitable technologies to attain a brine recovery of at least 80% in sugar refineries having Ion Exchange Resins for de-colorization of the sugar melt and rinse water recovery system in case of sugar refinery.
- xi. The industry shall use of surplus cooled condensate as make up water replacing the fresh water thus reducing fresh water requirement and effluent generation as well.
- xii. The industry shall adopt different options for separate or combined treatment of spray pond/PCT overflow as mentioned in charter.
- xiii. The industry shall ensure the maintenance of retention /contact time in various sub-units of ETP viz. equalization tank, aeration tank, primary and secondary clarifiers, multi-grade filters, multi grad and activated carbon filter etc. as per charter.

S.No.	Unit with sizes/capacity	Retention Time/Contact Time (Mentioned in CPCB charter)	To be followed by Industry
1.	Bar screen Chamber	30 minutes	30 minutes
2.	Oil & grease tank	45 minutes	45 minutes
3.	Equalization tank with aeration	10 hrs	10 hrs
4.	pH correction tank	10 minutes	10 minutes
5.	Primary Clarifier	4-5 hrs	4-5 hrs
6.	Aeration tank	24-28 hrs	24-28 hrs
7.	Secondary Clarifier	5-6 hrs	5-6 hrs
8.	Sand/multi grade filter	20-25 minutes	20-25 minutes
9.	Activated carbon filter	20-25 minutes	20-25 minutes
10.	Sludge drying bed	Not less than 0.03 m ³ per ton of cane.	Not less than 0.03 m ³ per ton of cane.
11.	Centrifuge	The equipment's to be of adequate capacity for handling the sludge generated in the process.	The equipment's to be of adequate capacity for handling the sludge generated in the process.
12.	Filter Press		

- xiv. Proper infrastructure for operation and maintenance of ETP shall be developed by recruiting hiring required skilled & technical staff.
- xv. Analytical facilities (laboratory) for analysis various streams of water, untreated and treated effluent for various parameters viz. pH, BOD, COD, TSS, TDS and MLSS etc. shall be developed by the industry.
- xvi. The industry shall create Environment Management Cell by appointing Environment officer, Engineer, chemist, agricultural expert and the same copy submitted to the board with contact details.
- xvii. The industry shall resort to rain water harvesting as a measure towards avoiding exploitation of natural resources. Rain water recharge structures/ pits/ ponds near to processing area should be discouraged due to possibilities of entering effluent/ industrial runoff in ground water.

Environmental management system

- i. Industry shall setup the environmental management cell including unit head, purchase/store manager, process operation head, ETP in charge to effectively monitoring of environmental compliance
- ii. Industry shall setup the environmental laboratory for testing of minimum wastewater quality

parameters like pH, TSS, BOD, COD, TSS and DO to effectively monitoring of ETP control parameters and ETP discharge norms.

7. Air pollution mitigation:

- i. The applicant shall use following fuel and install a comprehensive control system consisting of control equipment as is required with reference to generation of emissions and operate and maintain the same continuously so as to achieve the level of pollutants to the following standards:

Sr. No.	Stack attached with	Stack height (M)	Type of Fuel	Fuel Quantity	Emission Control Equipment	Emission standards not to exceed
1.	Boiler (90TPH × 1Nos.)	60	Bagasse	1080 MT/Day	Stack and Wet scrubber	PM-150 mg/NM ³
	Boiler (70 TPH× 1Nos.)	60	Bagasse	840 MT/Day	Stack and Wet scrubber	PM-150 mg/NM ³
	Boiler (30 TPH × 1 Nos.) (Stand by for distillery operations)	40	Bagasse	360 MT/Day	Stack and Wet scrubber	PM-150 mg/NM ³
2.	DG Set (320KVA × 1Nos. & 625 KVA × 1 Nos.)	4 each	HSD	75 Lt./Hr. & 100Lt/Hr.	Acoustic Enclosure	--
3	DG Set 1010 KVA × 1Nos.	6	HSD	200 Lt./Hr.	Acoustic Enclosure	--

In case of stoppage of functioning of STP, production has to be stopped immediately and this Board has to be intimated by fax/phone/email with a report in this regard to be dispatched immediately.

- ii. Noise from the D.G set and other sources (s) should be controlled by providing an acoustic enclosure as is required for meeting and ambient noise standards for night and day time as prescribed for respective areas/zones (Industrial, Commercial, Residential, Silence) which are as follows: -

Standards for noise level in db(A) leq	Industrial Area	
	Day time	Night time
	75	70

Day time: - 6.00 am to 10.00 pm, Night time: - 10.00 pm to 06.00 am

- iii. The industry shall operate in a manner so that all emissions be emitted through designated chimney/stack only.
- iv. The industry shall keep record for boiler ash & its disposal and maintain the designated boiler ash disposal site properly fenced with caution display to avoid accidents.
- v. The APCS for controlling emissions should be properly maintained and continuously operated. The stack should be as per norms and regular monitoring of stack and ambient air should be done by the laboratory recognized under E(P) Act 1986 and report be sent to the Board.
- vi. The water shall be sprinkled on the roads and premises for suppression of road dust.
- vii. The sugar factories shall provide On-line emission (stack) monitoring system to monitor, record and transmit the data related to SPM level (ng/Nm³) to UKPCB / CPCB.
- viii. The industry shall prepare Standard Operating Procedures (SOPs) for accident management and Process safety management.

8. Conditions under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016: -

Hazardous Waste Management (As per FORM 2 - [rule 6(2)])

- i. Number of authorization and date of issue:.....
Reference of application (No. and date) : Application ID: 5446498 Date 29-02-2024
- ii. **Factory Manager of M/S R.N.B.S. Sugar Mills Ltd.,** is hereby granted an authorization based on the enclosed signed inspection report for generation, collection, reception, storage, transport, reuse, recycling, recovery, pre-processing, co-processing, utilization, treatment, disposal or any other use of hazardous or other wastes or both on the premises situated at

Details of Authorization:

Sl. No.	Category of Hazardous Waste as per the Schedules I, II and III of these rules	Authorized mode of disposal or recycling or utilization or co-processing, etc.	Quantity (ton/annum)
1.	Used Oil (Schedule-I-5.1)	Recyclable	0.400 MTA
2.	Schedule-I -1.7	Recyclable	0.300 MTA

- iii. The authorization shall be valid for a period of **31.03.2029**.
- iv. The authorization is subject to the following general and specific conditions (Please specify any conditions that need to be imposed over and above general conditions, if any):

A. General conditions of authorization:

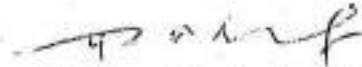
- The authorized person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.
- The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the State Pollution Control Board.
- The person authorized shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorization.
- Any unauthorized change in personnel, equipment or working conditions as mentioned in the application by the person authorized shall constitute a breach of his authorization.
- The person authorized shall implement Emergency Response Procedure (ERP) for which this authorization is being granted considering all site-specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time;
- The person authorized shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty"
- It is the duty of the authorized person to take prior permission of the State Pollution Control Board to close down the facility.
- The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.
- The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
- The hazardous and other waste which gets generated during recycling or reuse or recovery or pre-processing or utilization of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorization.
- The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
- An application for the renewal of an authorization shall be made as laid down under these Rules.

13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.
14. Annual return shall be filed by June 30th for the period ensuring 31st March of the year.

General Conditions

1. The applicant shall get analyses the samples of effluent/emission/hazardous wastes at least once in a three month from the laboratory recognized by the MoEF&CC and shall report to the SPCB.
2. The applicant shall however, not without the prior consent of the Board bring into use any new or altered outlet for the discharge of effluent or gases emission or sewage waste from the unit.
3. Treated waste water and domestic waste water shall be disposed jointly at one disposal point. The applicant shall provide discharge measurement equipment at final disposal point.
4. The applicant shall strictly comply with conditions of this CCA and submit compliance report of stipulated conditions with 30 days of receipt of this CCA. If, at any point of time, it is found that the industry is not complying with stipulated conditions or any further direction/instruction issued by the Board, legal action shall be initiated against the applicant.
5. The applicant shall maintain good housekeeping. All valves/pipes/sewer/drains etc. must be leak-proof.
6. The industry shall provide uninterrupted entry to this STP's/ETP's inlet and outlet points, Air Pollution Control equipment and stack for smooth sampling/monitoring of efficiency of pollution control measures.
7. The industry shall provide "Inspection Book" at the time of inspection to the Board's officials.
8. Whenever due to any accident or other unforeseen act or event, such emission occurs or is apprehended to occur in excess of standards laid down, such information shall be reported to the Board's offices and all other concerned offices. In case of failure of pollution control equipment, the production process connected to it shall be stopped with immediate effect.
9. In case of any damage to the agriculture productivity, human habitation etc. by the operation of industry, it shall be imperative to stop production in the industry with immediate effect and such information shall be reported to Board's offices. The industry shall be liable to pay compensation also in such cases as decided by the Competent Authority.
10. The applicant shall apply before the 60 days of expiry of CCA or any change in production types/production capacity/manufacturing process/capacity enhancement etc. or any change in effluent discharge point or emission point.
11. The Board reserves the right to revoke/add/modify any stipulated conditions issued along with CCA, as may be necessary.
12. Any unauthorized change in personnel, equipment as working condition as mentioned in the application by the person authorized shall constitute a breach of his authorization.
13. It is the duty of the authorized person to take prior permission of the Board to close down the facility.
14. The authorization is valid for temporary storage of Hazardous Waste within premises only.
15. It is duty of the authorized person to take prior permission of this Board to close and cleanup the facility for treatment, storage and disposal of hazardous waste.
16. Industry shall submit the latest copy of Audit Balance sheet/C.A. Certificate (Fixed Assets + Current Assets-Current Liabilities) so that the Consent fee payable by the industry may be verified.
17. Generated hazardous waste shall be stored temporarily in the factory premises and disposed of through authorized TSDF after obtaining the authorization from the Board

18. Unit shall develop green belt as per the guidelines provided by Central Pollution Control Board.
19. In case of non-compliance of CCA condition(s), Bank Guarantee No. 46/RRK/2019-20 submitted by the unit will be forfeited without any further information. The occupier shall submit validity extension of Bank Guarantee upto validity of CCA order i.e. 31-03-2029 validity, before one month of expiry of Bank Guarantee.
20. The industry shall comply with the provisions of Environment (Protection) Amendment, Rules 2018 notified by MoEF&CC by Notification no 49 Dated 25.01.2018, Environment (Protection) Act 1986, Water (Prevention and Control of Pollution) Act, 1974 as amended, Air (Prevention and Control of Pollution) Act, 1981 as amended, Plastic Waste Management Rule 2016, E-Waste (Management and Transboundary Movement) Rules 2016 (whichever is applicable).
21. In case of any closure order is issued by CPCB or SPCB against the unit, then this CCA order will remain suspended during the closure period. After ensuring the compliance and after revocation of the closure order, the CCA will automatically be effective from the date of issuance of the closure revocation order with additional conditions mentioned in the closure revocation order.



Dr. Parag Madhukar Dhakate
Member Secretary

Copy to:

Regional Officer, Uttarakhand Pollution Control Board, Regional Office, Roorkee
(Haridwar) for information and compliance.

Member Secretary



भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन, नदी विकास
और गंगा संरक्षण विभाग
केन्द्रीय भूमि जल प्राधिकरण
Government of India
Ministry of Jal Shakti
Department of Water Resources,
River Development & Ganga Rejuvenation
Central Ground Water Authority

(भूजल निकासी हेतु अनापत्ति प्रमाण पत्र)
NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION

Project Name:	Raj Bahadur Narain Singh Sugar Mill Ltd. Laksar		
Project Address:	Laksar		
Town:	Laksar (np)	Block:	Laksar
District:	Haridwar	State:	Uttarakhand
Pin Code:			
Communication Address:	Raj Bahadur Narain Singh Sugar Mill Ltd, Laksar, Laksar, Haridwar, Uttarakhand - 247663		
Address of CGWB Regional Office :	Central Ground Water Board Uttarakhand Region, 419-a, Kanwali Road, Balliwala, Near Urja Bhawan, Dehradun, Dehradun, Uttarakhand - 248001		

1. NOC No.:	CGWA/NOC/IND/REN/1/2025/10520	2. Date of Issuance	17/01/2025
3. Application No.:	21-4/733/UT/IND/2017	4. Category: (GWRE 2024)	Safe
5. Project Status:	Existing Ground Water	6. NOC Type:	Renewal
7. Valid from:	16/07/2024	8. Valid up to:	15/07/2027

9. Ground Water Abstraction Permitted:							
Fresh Water		Saline Water		Dewatering		Total	
m ³ /day	m ³ /year	m ³ /day	m ³ /year	m ³ /day	m ³ /year	m ³ /day	m ³ /year
460.00	59800.00					460.00	59800.00

10. Details of ground water abstraction /Dewatering structures													
Total Existing No.:1							Total Proposed No.:0						
	DW	DCB	BW	TW	MP	MPu	DW	DCB	BW	TW	MP	MPu	
Abstraction Structure*	0	0	0	1	0	0	0	0	0	0	0	0	

*DW- Dug Well; DCB-Dug-cum-Bore Well; BW-Bore Well; TW-Tube Well; MP-Mine Pit;MPu-Mine Pumps													
11. Ground Water Abstraction/Restoration Charges paid (Rs.):	208374.00												
12. Environment Compensation (if applicable) paid (Rs.):	1038900.00												
13. Number of Piezometers(Observation wells) to be constructed/ monitored & Monitoring mechanism.	No. of Piezometers						Monitoring Mechanism						
							Manual	DWLR**	DWLR With Telemetry				
**DWLR - Digital Water Level Recorder	1						0	1	0				

(Compliance Conditions given overleaf)

This is an auto generated document & need not to be signed.

18/11, जयनगर हाउस, मानसिंह रोड, नई दिल्ली - 110011 / 18/11, Jannagar House, Mansingh Road, New Delhi-110011

Phone: (011) 23383561 Fax: 23382051, 23386743

Website: cgwa-noc.gov.in

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SAVE WATER - SAVE LIFE

Validity of this NOC shall be subject to compliance of the following conditions:

Mandatory conditions:

- 1) Installation of tamper proof digital water flow meter with telemetry on all the abstraction structure(s) shall be mandatory for all users seeking No Objection Certificate and intimation regarding their installation shall be communicated to the CGWA within 30 days of grant of No Objection Certificate.
- 2) Proponents shall mandatorily get water flow meter calibrated from an authorized agency once in a year.
- 3) Construction of purpose-built observation wells (piezometers) for ground water level monitoring shall be mandatory as per Section 14 of Guidelines. Water level data shall be made available to CGWA through web portal. Detailed guidelines for construction of piezometers are given in Annexure-II of the guidelines.
- 4) Proponents shall monitor quality of ground water from the abstraction structure(s) once in a year. Water samples from bore wells/ tube wells / dug wells shall be collected during April/May every year and analysed in NABL accredited laboratories for basic parameters (cations and anions), heavy metals, pesticides/ organic compounds etc. Water quality data shall be made available to CGWA through the web portal.
- 5) In case of mining projects, additional key wells shall be established in consultation with the Regional Director, CGWB for ground water level monitoring four (4) times a year (January, May, August and November) in core as well as buffer zones of the mine.
- 6) In case of mining project the firm shall submit water quality report of mine discharge/ seepage from Govt. approved/ NABL accredited lab.
- 7) The firm shall report compliance of the NOC conditions online in the website (www.cgwa-noc.gov.in) within one year from the date of issue of this NOC.
- 8) Industries abstracting ground water in excess of 100 m³/d shall undertake annual water audit through certified auditors and submit audit reports within three months of completion of the same to CGWA. All such industries shall be required to reduce their ground water use by at least 20% over the next three years through appropriate means.
- 9) Application for renewal can be submitted online from 90 days before the expiry of NOC. Ground water withdrawal, if any, after expiry of NOC shall be illegal & liable for legal action as per provisions of Environment (Protection) Act, 1986.
- 10) This NOC is subject to prevailing Central/State Government rules/laws/orders or Court orders related to construction of tube well/ground water abstraction structure / recharge or conservation structure/discharge of effluents or any such matter as applicable.

General conditions:

- 11) No additional ground water abstraction and/or de-watering structures shall be constructed for this purpose without prior approval of the Central Ground Water Authority (CGWA).
- 12) The proponent shall seek prior permission from CGWA for any increase in quantum of groundwater abstraction (more than that permitted in NOC for specific period).
- 13) Proponents shall install roof top rain water harvesting in the premise as per the existing building bye laws in the premise.
- 14) The project proponent shall take all necessary measures to prevent contamination of ground water in the premises falling which the firm shall be responsible for any consequences arising thereupon.
- 15) In case of industries that are likely to contaminate the ground water, no recharge measures shall be taken up by the firm inside the plant premises. The runoff generated from the rooftop shall be stored and put to beneficial use by the firm.
- 16) Wherever feasible, requirement of water for greenbelt (horticulture) shall be met from recycled / treated waste water.
- 17) Wherever the NOC is for abstraction of saline water and the existing well(s) is/are yielding fresh water, the same shall be sealed and new tubewell(s) tapping saline water zone shall be constructed within 3 months of the issuance of NOC. The firm shall also ensure safe disposal of saline residue, if any.
- 18) Unexpected variations in inflow of ground water into the mine pit, if any, shall be reported to the concerned Regional Director, Central Ground Water Board.
- 19) In case of violation of any NOC conditions, the applicant shall be liable to pay the penalties as per Section 16 of Guidelines.
- 20) This NOC does not absolve the proponents of their obligation / requirement to obtain other statutory and administrative clearances from appropriate authorities.
- 21) The issue of this NOC does not imply that other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would consider the project on merits and take decisions independently of the NOC.
- 22) In case of change of ownership, new owner of the industry will have to apply for incorporation of necessary changes in the No Objection Certificate with documentary proof within 60 days of taking over possession of the premises.
- 23) This NOC is being issued without any prejudice to the directions of the Hon'ble NG/Tribunal orders in cases related to ground water or any other related matters.
- 24) Proponents, who have installed/constructed artificial recharge structures in compliance of the NOC granted to them previously and have availed rebate of upto 50% (fifty percent) in the ground water abstraction charges/ground water restoration charges, shall continue to regularly maintain artificial recharge structures.
- 25) Industries which are likely to cause ground water pollution e.g. Tanning, Slaughter Houses, Dye, Chemical/Petrochemical, Coal washeries, pharmaceutical, other hazardous units etc. (as per CPCB list) need to undertake necessary well head protection measures to ensure prevention of ground water pollution as per Annexure III of the guidelines.
- 26) In case of new infrastructure projects having ground water abstraction of more than 20 m³/day, the firm/entity shall ensure implementation of dual water supply system in the projects.
- 27) In case of infrastructure projects, paved/parking area must be covered with interlocking/perforated tiles or other suitable measures to ensure groundwater infiltration/harvesting.
- 28) In case of coal and other base metal mining projects, the project proponent shall use the advance dewatering technology (by construction of series of dewatering abstraction structures) to avoid contamination of surface water.
- 29) The NOC issued is conditional subject to the conditions mentioned in the Public notice dated 27.01.2021 falling which penalty/EC/cancellation of NOC shall be imposed as the case may be.
- 30) This NOC is issued subject to the clearance of Expert Appraisal Committee (EAC) (if applicable).
- 31) In the self-compliance report, the PP shall submit details of Drilling Agency/ Agencies, which has/ have constructed BW(s)/ TW(s) along with undertaking to the effect that all necessary measures have been taken as per directions of Hon'ble Supreme Court provided in Annexure-VII of guidelines dated 24.09.2020 in respect of abandoned/ failed BW(s)/ TW(s)/Piezometer(s), if any. The PP is advised to engage registered drilling agency/ agencies. In the event of any mishap/ unfortunate incident due to negligence in taking measures for prevention of accident due to falling in Bore Well, both PP and concerned drilling agency shall jointly be held responsible and penal action as per extant Government rules shall be taken.

(Non-compliance of the conditions mentioned above is likely to result in the cancellation of NOC and legal action against the proponent.)

18/11, जामनगर हाउस, मावसिंह रोड, नई दिल्ली - 110011 / 18/11, Jamnagar House, Mansingh Road, New Delhi-110011

Phone: (011) 23383561 Fax: 23382051, 23386743

Website: cgwa-noc.gov.in

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SAVE WATER - SAVE LIFE

CENTRAL GROUND WATER AUTHORITY
Department of Water Resources, River Development and Ganga Rejuvenation
Ministry of Jal Shakti, Govt. of India

Receipt

(As per the guideline Gazette Notification S.O. 3281(E) regarding the New Guidelines dated 24.09.2020 of CGWA, MoJS, Govt. of India)
<https://cgwa-noc.gov.in>

Application No.:	21-4/733/UT/IND/2017	Date of Issuance:	17/01/2025
Name of Firm:	RAI BAHADUR NARAIN SINGH SUGAR MILL LTD. LAKSAR		
AppType Category:	Sugar		
Application Type:	Industrial		
PAN/GSTIN No. of Firm/Individual:	/		

S N	Description	Amount (Rs.)
1.	Application Processing Fee	5000.00
2.	Ground Water Abstraction charges	208374.00
3.	Ground Water Restoration charges	0
4.	Environmental Compensation Charges (ECRGW) (Date From to) Days-	
5.	Penalty for non-Compliance of NOC conditions Condition to be mentioned	200000.00
6.	Adjustment Charges	
7.	Rebate	
8.	Charges for correction/modification in the existing issued No Objection Certificate	
S.No.	Description	Rate
(i)	Change in User ID	Rs. 1000
(ii)	Change in firm Name	Rs. 5000
(iii)	Extension of No Objection Certificate	Rs. 5000
(iv)	Issuance of duplicate No Objection Certificate	Rs. 5000
(v)	Issuance of corrigendum to No Objection Certificate	Rs. 5000
(vi)	Any other items/correction etc.	Rs. 500
Rs. Rupees Four Lakh Thirteen Thousand Three Hundred Seventy Four Only		413374.00

This is an system generated invoice, hence, does not require ink signed.

18/11, जामनगर हाउस, मानसिंह रोड, नई दिल्ली - 110011 / 18/11, Jamnagar House, Mansingh Road, New Delhi-110011
Phone: (011) 23383561 Fax: 23382051, 23386743
Website: cgwa-noc.gov.in

पानी बचाये - जीवन बचाये
SAVE WATER - SAVE LIFE

Term and conditions:

- i. All disputes are subject to Delhi Jurisdiction.
- ii. Any complaint in regard to the rates will not be entertained.

Member-Secretary
CGWA, New Delhi

CENTRAL GROUND WATER AUTHORITY



Grams : SUGAR LHAKSAR
 Phones: 01332-254653
 Fax: 01332-254655, 254460
 E-mail: edprbns@yahoo.com
 CIN:U74899DL1932PLC000298
 TIN : 05002166908

Rai Bahadur Narain Singh Sugar Mills Limited

Works : Laksar – 247663 (Distt. Haridwar) Uttarakhand

पत्राक सं:-जी०एम०/१५६०

दिनांक - 31.03.2024

श्रीमान उपजिलाधिकारी,
 लकसर
 जिला-हरिद्वार

विषय :- एन.जी.टी. द्वारा गठित संयुक्त टीम द्वारा लकसर ड्रेन मिल परिसर में Conduit Pipe लगाने के सम्बन्ध में।

महोदय,

उपरोक्त विषय में संयुक्त टीम द्वारा observation/Recommandation है। कि The unit shall make Provision of laying out a closed conduit pipe line at Laksar Drain (Which is currently flowing as open channel) starting from 500 meters upstream (u/s) to 500 meter down stream (d/s) of unit shall be made by the unit under supervision of UKPCB to rule out any possibility of discharge of treated /untreated effluent into drain)

कृपया उपरोक्त विषय के सम्बन्ध में वर्षा के समय लकसर शहर के पानी की निकासी आदि को ध्यान में रखते हुए अनुमति देने की कृपा करें।

आपकी अति कृपा होगी।

धन्यवाद,

भवदीय,

प्रधान प्रबन्धक

प्रतिलिपि - श्रीमान अधिशासी अधिकारी, नगरपालिका, लकसर

प्रधान प्रबन्धक

Dimen
 11/03/24

कार्यालय नगर पालिका परिषद लकसर जनपद हरिद्वार।

पत्रांक- 17

/NGT/2024-25

दिनांक-15-04-2024

सेवा में,

उपजिलाधिकारी,
लकसर।

विषय:-शुगर मिल लकसर के ड्रेन मिल परिसर में Conduit Pipe लगाने के सम्बन्ध में।
महोदय,

उपरोक्त विषय आर0बी0एन0 शुगर मिल लकसर के पत्र सं0-जी0एम0/1560 दिनांक-31-03-2024 पर आपके आदेश के अनुपालन में अवगत कराना है कि मुख्य बाजार लकसर से सब्जी मण्डी होते हुये शुगर मिल क्षेत्र से निकलने वाले मुख्य नाले को शुगर मिल क्षेत्र में कवर्ड किये जाने हेतु शुगर मिल लकसर द्वारा अनुमति चाही गई है।

उक्त के सम्बन्ध में अवगत कराना है कि लकसर बाढ़ग्रस्त क्षेत्र होने के कारण लकसर नगर में प्रवेश करने वाले बाढ़/बरसात के पानी की निकासी इसी मुख्य नाले से होती है। ऐसी दशा में इस मुख्य नाले के अन्दर ह्यूम पाईप अथवा इसे कवर्ड किया जाना नगर हित में उचित प्रतीत नहीं होता है।

अतः आख्या सेवा में प्रेषित है।

भवदीय,

(कुलदीप सिंह चौहान)

अधिसासी अधिकारी

नगर पालिका परिषद लकसर-हरिद्वार

प्रतिलिपि:- प्रबन्धक आर0बी0एन0 शुगर मिल लकसर को सूचनार्थ प्रेषित।

अधिसासी अधिकारी

नगर पालिका परिषद लकसर

जनपद-हरिद्वार

o/c



15/4/24

o/c

15/4/24

कार्यालय नगर पालिका परिषद लकसर जनपद हरिद्वार।

पत्रांक- 17 / NGT / 2024-25

दिनांक- 15-04-2024

सेवा में,

उपजिलाधिकारी,
लकसर।

विषय:- शुगर मिल लकसर के ड्रेन मिल परिसर में Conduit Pipe लगाने के सम्बन्ध में।
महोदय,

उपरोक्त विषय आर0बी0एन0 शुगर मिल लकसर के पत्र सं0-जी0एम0/1560 दिनांक-31-03-2024 पर आपके आदेश के अनुपालन में अवगत कराना है कि मुख्य बाजार लकसर से सब्जी मण्डी होते हुये शुगर मिल क्षेत्र से निकलने वाले मुख्य नाले को शुगर मिल क्षेत्र में कवर्ड किये जाने हेतु शुगर मिल लकसर द्वारा अनुमति चाही गई है।

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अतः आख्या सेवा में प्रेषित है।

भवदीय,

(कुलदीप सिंह चौहान)

अधिशासी अधिकारी

नगर पालिका परिषद लकसर-हरिद्वार

प्रतिलिपि:- प्रबन्धक आर0बी0एन0 शुगर मिल लकसर को सूचनार्थ प्रेषित।

अधिशासी अधिकारी
नगर पालिका परिषद लकसर
जनपद-हरिद्वार

o/c



15/4/24

Signature

15/4/24

ADEQUACY REPORT

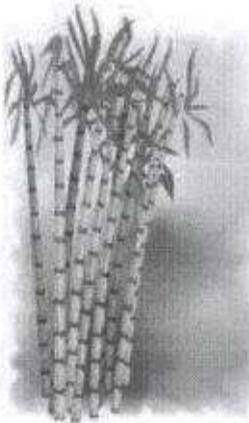
FOR

THE EFFLUENT TREATMENT PLANT OF DISTILLERY

OF

**M/s RAI BAHADUR NARAIN SINGH SUGAR MILLS LTD.
(DISTILLERY DIVISION)
LAKSAR, HARIDWAR - 247663
UTTARAKHAND**

PREPARED BY:



**राष्ट्रीय शर्करा संस्थान
NATIONAL SUGAR INSTITUTE**

भारत सरकार

Government of India

उपभोक्ता मामले खाद्य एवं सार्वजनिक वितरण, मंत्रालय

Ministry of Consumer Affairs, Food & Public Distribution

खाद्य एवं सार्वजनिक वितरण विभाग

Department of Food & Public Distribution

कानपुर-208017 (उत्तर प्रदेश) भारत

Kanpur- 208017 (U.P.) India

Ph. +91-512-2570730, 2570273

E-mail: nsikanpur@nic.in

1. INTRODUCTION

M/s Rai Bahadur Narain Singh Sugar Mills Ltd. (Distillery Division), Laksar, Haridwar vide letter no. GM/01/IC/370 dt. 26.12.2024 approached National Sugar Institute, Kanpur for inspecting their modified ETP being attached to 120 KLPD molasses-based distillery located in close proximity with 10,000 TCD sugar plant and to submit report on its adequacy keeping in view CPCB/ SPCB guidelines related to molasses-based distilleries. The factory proposes to operate the unit for 300 days following spray dryer route. Hence, the adequacy through spray dryer route has been assessed for 300 days of operation.

2. COMPOSITION OF THE TEAM

1. Dr. Seema Paroha, Director, NSI Kanpur
2. Shri Anoop Kumar Kanaujia, Asst. Professor (Sugar Engineering)

3. DATE /PERIOD OF VISIT

The visit was undertaken by the above officers on 04th January, 2025 to assess adequacy of the modified Effluent Treatment Plant of molasses-based distillery. The report is based on the data provided by the factory and physical verification made at site. During the period of visit the factory was found in operation and as such the inferences has been drawn on the basis of data made available by the factory.

4. FACTORY OFFICIAL PRESENT DURING THE VISIT

Shri S P Singh, General Manager and Shri Manish Rathi, D.G.M. (Distillery) of the unit along with their other technical staff were present during the visit for detailed discussion and physical verification of the site.

5. OBSERVATION AND DISCUSSIONS

The Molasses based distillery unit namely M/s Rai Bahadur Narain Singh Sugar Mills Ltd. (Distillery Division) is situated in Laksar, Haridwar, Uttarakhand adjacent to the Sugar unit of 10,000 TCD capacity which was established in the year 2014 and its present Licensed/ Installed capacity is 120 KLPD.

The consent issued by UKPCB, Environment Consent, and Excise/PD-2 are attached as **Annexure 1, 2, & 3** respectively. The factory has installed Bio-digester, Multiple Effect Evaporator system to concentrate the spent wash generated during the distillation process and being dried into spray dryer to achieve Zero Liquid Discharge (ZLD).

Performance of the distillery unit as reported by the unit for the last three Alcohol years:

Sl. No	Particulars	2021-22 (December to November)	2022-23 (December to November)	2023-24 (December to November)
1	Installed Capacity in KLPD	60	120	120
2	Production in KL/ Annum	C-Heavy- 410.55 B-Heavy- 15259.88	B-Heavy- 16315.19 Syrup- 6904.74	C-Heavy- 806.87 B-Heavy- 13606.40
3	Products Manufactured KL/ Annum			
	Rectified Spirit	15.42	0	0
	Extra Neutral Alcohol	1476.45	763.93	1189.29
	Absolute Alcohol/Fuel Ethanol	14206.63	22500.96	13250.03
4	Type of Raw Material consumed	C-Heavy/ B-Heavy	Syrup/ B-Heavy	C-Heavy/ B-Heavy
5	Raw Material consumed MT/Annum	1951.57 (C- Heavy) 51805.5 (B- Heavy)	22341.50 (Syrup) 55034.1(B- Heavy)	3491.12 (C- Heavy) 46794.2 (B- Heavy)
6	No. of operating days	270.46	213.63	143.46
7	Alcohol % in wash	C-Hy- 9.57 B-Hy- 11.93	B-Hy- 12.04 Syrup- 13.34	C-Hy- 8.82 B-Hy- 11.26
8	Alcohol yield lit/ctl	C-Hy- 21.04 B-Hy- 29.46	B-Hy- 29.65 Syrup- 30.91	C-Hy- 23.11 B-Hy- 29.08
9	Spent wash generation, l/l	C-Hy- 8.0 B-Hy- 6.0	B-Hy- 5.98 Syrup- 5.80	C-Hy- 7.97 B-Hy- 5.95

The last three months data duly certified with Excise Department regarding performance of distillery is as under:

Month	Month wise Alcohol Production (in B.L.)	Working Days	Avg. Alcohol production per day in KL	Molasses Distilled (in Qtls.)	Recovery In BL/Qtls.
Feb-24	B-Hy: 2712363.3	26	104.32	B-Hy: 91696	29.58
	C-Hy: 179851.8	03	59.95	C-Hy:7764	23.16
	Total-2892215.1	29	99.73	Total-99460	29.08
Mar-24	B-Hy: 2533418.3	26	97.44	B-Hy: 85403	29.66
	C-Hy: 299477.5	05	59.90	C-Hy:12921	23.18
	Total-2832895.8	31	91.38	Total-98324	28.81
Dec-24	2955708.8	31	95.35	B-Hy- 101659	29.07
Total	8680819.7	91	95.39	299443	28.99

Production data duly certified with Excise Department of last three months attached as Annexure 4 (Copy of Form PD-9/ PD-29).

6. PROCESS ADOPTED FOR ALCOHOL PRODUCTION

The factory uses fed batch fermentation, MPR distillation system for production of Rectified Spirit (RS)/ ENA and Ethanol. The factory has installed Bio-digester, Multiple Effect Evaporator system to concentrate the spent wash generated during the distillation process and being dried into spray dryer to achieve Zero Liquid Discharge (ZLD). C-Heavy Molasses/ B-Heavy Molasses/ Syrup is being used as raw material for producing RS, ENA and Ethanol which is obtained from own sugar factory or procured from other sugar factories.

The main processes for the production of RS, ENA and Ethanol at the unit are:

- a) Fermentation (Fed batch)
- b) Distillation (MPR)
- c) Molecular Sieve Dehydration (MSDH)
- d) Bio-Digester
- e) Multiple Effect Evaporator (MEE)
- f) Spray Dryer
- g) Condensate Polishing Unit (CPU)

The various sections involved in the process for manufacture of RS, ENA and Ethanol are:

- i. Molasses Storage and Handling Section
- ii. Fermentation Section
- iii. Distillation Section
- iv. Molecular Sieve Dehydration

- v. Bio-Methanation/ Bio-Digester Section
- vi. Multiple Effect Evaporator Section
- vii. Spray Dryer
- viii. Process Water Treatment Section

(i) Molasses Storage, Handling and Distribution:

Molasses is stored in two steel tanks at the distillery having storage capacity of 60000 Qtls. and 80000 Qtls. Stored molasses in the molasses storage tank is pumped to the molasses receiving tank in the fermentation section.

(ii) Molasses Fermentation:

The fermentation consists of following steps;

- a. Molasses weighing
 - b. Yeast Propagation
 - c. Pre fermentation
 - d. Fermentation
- a. Molasses Weighing** - Molasses is transferred into fermentation house after weighing. This molasses is diluted in diluter as per feed requirement like feed to Pre-fermentation/ Fermentation stages.
- b. Yeast Propagation**- Culture yeast is grown in own laboratory. Yeast propagation section comprises of molasses diluter and hygienically engineered yeast vessels equipped with cooling and air sparging facility.
- c. Pre-Fermentation**- In Pre-Fermenter vessel, molasses, process water, nutrients and additives are added for activation/growth of cell mass. Filtered air is given as required for cell growth. Activated cell mass is transferred to Fermenter to maintain desired cell mass concentration in Fermenter. Laboratory propagated cell mass is scaled up in series of yeast vessels. Cell mass from Yeast vessel is transferred to yeast activation vessel to build up cell mass required for Fermentation by cell mass transfer pump.
- d. Fermentation** -The fermentation process is engineered to operate in fed-batch mode depending upon varying qualities of molasses. The purpose of fermentation is to convert the fermentable sugars into alcohol. During fermentation, sugars are broken down into alcohol and carbon-di-oxide. Significant heat release takes place during fermentation. The fermenter temperature is maintained by cooling the fermented wash by forced circulation in plate heat exchangers. The cooling water used in plate type heat exchanged is cooled by circulating through cooling tower. Around 63 m³ spent lees from MPR distillation produced in the process is re-cycled and used for dilution during fermentation process. There is also a provision for spent wash recycle to fermentation depending on solid concentration in fermented wash and molasses composition.

Type: Molasses based Fed Batch Type Fermentation

Nos. of Fermenter: Total 07 Nos. of Fermenters, Total Capacity – 28 Lac liters, 01 no. Wash Holding/ Intermediate tank for uninterrupted wash feed to Distillation Plant.

Yeast Vessels: 01 series of 04 vessels in each and of Capacity 100, 520, 2600 and 13000 Liters.

Unit has also installed Fermenters sludge settling system consists of 02 Nos. settling tanks having a capacity of 20000 liters each.

(iii) Distillation

The next stage in the production of alcohol is to separate alcohol from fermented wash and to concentrate it for final Product. The fermented wash is distilled and rectified. The following equipments are used.

1. Degasifying Column
2. Analyzer Column
3. Pre-Rectification Column
4. R.S. Recovery Column
5. Ethanol Recovery Column
6. Molecular Sieve Bed (03 nos.)
7. Purifier Column
8. Rectifier cum Exhaust Column
9. ENA Simmering Column

Pre-heated Fermented wash is fed to Degasifying Column. Fermented wash is stripped off alcohol by a small quantity of Steam is feed in degasifying column. Vapors of Degasifying Column are fed to Aldehyde column and appropriate technical alcohol cut is taken out from this Column. The Degasifying column bottom Liquid is pumped to analyzer Column for stripping of alcohol from fermented wash. Analyzer vapors from Top are fed to pre-rectifier column this column further concentrates alcohol to @ 95 % v/v and also separates low boiling impurities from column top. The column operates under vacuum. Rectified spirit draw of 95% v/v is taken out from the upper trays of pre rectifier column and fed to RS simmering column which separate the light ends present in RS under high reflux and taken to storage section after passing it through a cooler.

Molecular Sieve Dehydration (MSDH):

Rectified Spirit (RS) fed into the top of the re-boiler and steam applied in bottom of re-boiler. The alcohol and water vapors pass through the super heater to maintain the out let temperature between 135-138°C. After that alcohol and water vapors goes to sieve bed where water vapors are absorbed by molecular sieve and alcohol vapors pass out. These vapors condensed in product condenser and cooled through cooler which is called absolute alcohol having alcohol concentration between 99.8 -99.9% v/v.

Heat integration and Energy input Points

- Analyzer column driven by vapour of analyzer re-boiler.
- Vapors from analyzer column sent to pre-rectifier column and trapped alcohol fed to purifier column with small qty of DM water. recovery column is again driven by small qty of steam for separation of fusel oil. MSDH section evaporator column is driven by steam during Ethanol production.

Supplier: M/s Naran Lala Pvt. Ltd., Gujrat

Nos. of Column: 08 Nos. for Wash to Ethanol and 07 Nos. Wash to ENA.

Type: Wash to RS and Wash to ENA are multi pressure fractional distillation.

Cooling Towers:

One No. for Fermentation- 750 M³/hr Recirculation Rate

One No. for Distillation 1400 M³/hr Recirculation Rate

One No. for MSDH- 350 M³/hr Recirculation Rate

One No. for MEE Plant - 1500 M³/hr Recirculation Rate

The plant process flow diagram is attached as **Annexure 5**.

7. EQUIPMENT INSTALLED FOR ACHIEVING ZERO LIQUID DISCHARGE (ZLD)

The factory has envisaged two stages of treatment for the spent wash to obtain Zero Liquid Discharge. The raw spent wash from the distillery is being taken in Bio-digester and then concentrated into Multiple Effect Evaporator (MEE) System. The concentrated spent wash from MEE is then being dried into spray dryer.

As per the data provided, the plant generates spent wash at the rate of about 6.0 lit/lit of Alcohol produced with a Brix of around 10.5-11.5. Average spent wash generated is about 720 KL/day on full plant capacity (Volume is measured by Mass Flow meter) which is fed into MEE. Copy of log book in respect to spent wash generated is attached as **Annexure 6**.

The characteristics of raw spent wash (on B-Hy molasses) produced are given below;

pH	4.5- 4.7
Specific gravity	1.02 - 1.03
Brix Content	10.5-11.5
Sludge v/v	08-10%
VFA	3000- 4000 mg/l
COD	120000 - 125000 mg/l

Spent Wash Generation Data – (February, March & December 2024)

Total spent wash generation Feb, March & Dec 2024 from Log book (KL)	51319.78
Total Alcohol production Feb, March & Dec 2024 from Excise data (KL)	8680.82
Spent wash generation KL/KL of Alcohol	5.9

i. Bio-Methanation Plant/ Bio-Digester

Three nos. CSTR type Bio-digesters were installed in year 2014 and 2022. The capacity of two bio-digesters is 10000 M³ each and other one is 7500 M³ and hydraulic retention time of bio-digesters is about 21 days. During idle days digesters are maintained by keeping some spent wash in storage pits and slow feeding into digesters is being carried out. Temperature of digesters is being maintained through PHE, by exchanging heat of spent wash with bio-digester re-circulation material. Generated sludge is being consumed as bio-manure. The initial and final COD/ BOD and Bio-gas production data is attached as **Annexure 7**.

ii. Multiple Effect Evaporator (MEE)**a. Multiple Effect Evaporator (MEE) – Old Plant of 60 KLPD**

The factory has six-effect Multiple Effect Evaporator which comprises of 4 nos. (4W+0S) Falling Film Evaporator bodies and 2 nos. (2W+0S) Forced Circulation Evaporator bodies wherein the solid content of BMSW is increased up to 36-37% solids. The system is having one degasser and does not have any stand-by body. MEE is designed for feed capacity of 750 KLPD.

The first and second body of the evaporator is driven by steam at suitable temperature and pressure. The third effect is driven through the vapour from the first and second effect and consequently the fourth effect is driven through the vapour from the third effect and so on up to sixth effect. The configuration of old MEE set is attached as **Annexure 8**.

Designed Technical Specifications of 6 Stage- Old Multi Effect Evaporator (MEE)

S.No.	Particulars	Type	HTA (M ²)	OD of tubes (mm)	Length of tubes (mm)	Thickness of tubes (mm)	Thickness of shell (mm)
1	Falling Film Evaporator- 1	Falling Film	250	50.8	12000	1.2	4
2	Falling Film	Falling	250	50.8	12000	1.2	5

	Evaporator- 2	Film					
3	Falling Film Evaporator- 3	Falling Film	250	50.8	12000	1.2	5
4	Falling Film Evaporator- 4	Falling Film	250	50.8	12000	1.2	5
5	Forced Circulation Evaporator- 1	Forced Circulation	264	38.1	9000	1.6	5
6	Forced Circulation Evaporator- 2	Forced Circulation	264	38.1	9000	1.6	5
7	Surface Condenser		220	50.8	12000	1.2	5

The MEE is designed for feed rate @ 750 m³/day to concentrate the spent wash at about 180 m³/day with solid content 36-37%. Copy of log book in respect to MEE performance is attached as **Annexure 9**.

b. Multiple Effect Evaporator (MEE) – New Plant of 60 KLPD

The factory has two-effect integrated Multiple Effect Evaporator which comprises of 3 nos. (2W+1S) Falling Film Evaporator bodies and three-effect standalone Multiple Effect Evaporator which comprises of 2 nos. (2W+0S) Falling Film Evaporator bodies and 2 nos. (1W+1S) Forced Circulation Evaporator bodies wherein the solid content of BMSW is increased up to 37-38% solids. The system is having one degasser and does not have any stand-by body. MEE is designed for feed capacity of 750 KLPD. The configuration of new MEE set is attached as **Annexure 10**.

Designed Technical Specifications of 3 Stage- Integrated Multi Effect Evaporator (MEE)

S.No.	Particulars	Type	HTA (M ²)	OD of tubes (mm)	Length of tubes (mm)	Thickness of tubes (mm)	Thickness of shell (mm)
1	Falling Film Evaporator- 1	Falling Film	410	50.8	12000	1.2	4
2	Falling Film Evaporator- 2	Falling Film	410	50.8	12000	1.2	5
3	Falling Film Evaporator- 3	Falling Film	300	50.8	12000	1.2	5
4	Surface Condenser		185	50.8	12000	1.2	5

Designed Technical Specifications of 4 Stage- Standalone Multi Effect Evaporator (MEE)

S.No.	Particulars	Type	HTA (M ²)	OD of tubes (mm)	Length of tubes (mm)	Thickness of tubes (mm)	Thickness of shell (mm)
1	Falling Film Evaporator- 1	Falling Film	450	50.8	9000	1.2	4
2	Falling Film Evaporator- 2	Falling Film	450	50.8	9000	1.2	5
3	Forced Circulation Evaporator- 1	Forced Circulation	650	38.1	9000	1.6	5
4	Forced Circulation Evaporator- 2	Forced Circulation	650	38.1	9000	1.6	5
5	Surface Condenser		275	50.8	12000	1.2	5

The MEE is designed for feed rate @ 750 m³/day to concentrate the spent wash at about 180 m³/day with solid content 37-38%. Copy of log book in respect to MEE performance is attached as **Annexure 11**.

iii. Spray Dryer

The Multiple Effect Evaporator system is followed by spray dryer system for attaining Zero Liquid Discharge (ZLD).

1	No. of Spray Dryers	02 nos.
2	Year of installation/ establishment & commissioning of Spray Dryer	2019-20 & 2021-22
3	Type of Spray Dryer	Rotating Disk Spray Dryer
4	Capacity of Spray Dryer	2 x 45 TPD
5	Design details	
	Feed rate of Concentrated Spent Wash	2 x 180 TPD
	Product manufacturing capacity	2 x 45 TPD
6	Spray Dryer Supplier details	M/s Raj Process Equipments & Systems Pvt. Ltd., Pune

7	Spray Dryer Performance details	
	Actual Slop used	178 TPD
	Quantity of product generated	68 TPD
	Characteristics of generated product	Potash Rich
	Method of disposal	Copy of sale invoices attached as Annexure 12.
	No. of working days per annum	300 days
8	Other Details	
	Shut down days-cleaning period required	-
	Hot air temperature Deg. Cent.	240°C
	Bio-gas required	1200 m ³ /hr
9	Emission control system or Air Pollution Control Device (APCD) installed (Yes/No)	Yes
	Name of installed Emission control system/ APCD	Wet Scrubber
	Stack Height	40 Mtrs.
10	On-line emission (stack) monitoring system installed (Yes/No)	Yes
	Details of on-line emission (stack) monitoring system for boiler	Provided by M/s N.T. Bloomfield Enterprises, New Delhi
	On-line emission (stack) monitoring system connected to CPCB/SPCB server at time of inspection? (Yes/No)	Yes

Copy of log book records of spray dryer performance is attached as **Annexure 13.**

iv. Condensate Polishing Unit (CPU)

The conventional (Anaerobic/ Aeration/ MGF/ ACF) CPU was installed in year 2014 supplied by M/s M.M. Enviro Projects Pvt. Ltd. P& I diagram of CPU System is attached as **Annexure 14.**

Designed Characteristics of CPU:

Capacity	1050 KLD
Sources of effluent coming into CPU	MEE condensate Spent lees Cooling Tower Blow-down
Recovery %	90%
Quantity utilized per day %	100% of treated water is proposed to be used in molasses dilution/ cooling tower make-up water/ floor washings <i>etc.</i>

Copy of log book records of CPU performance is attached as **Annexure 15**.

8. ETP PLANT & MACHINERY DETAILS

S. No.	Description	Details
1	Multi Effect Evaporator	<p>a. Old MEE Plant The six-effect MEE of capacity 750 M³/ day is installed for concentrating bio-methanated spent wash. It consists of Falling Film type Evaporators (4W+0S) having 250 m² HSA each and Forced Circulation type Evaporators (2W+0S) having 264 m² HSA each.</p> <p>b. New MEE Plant The five-effect MEE of capacity 750 M³/ day is installed for concentrating bio-methanated spent wash. The two-effect integrated MEE consists of Falling Film type Evaporators (2W+1S) having 410 m², 2x300 m² HSA. The three-effect standalone MEE consists of Falling Film type Evaporators (2W+0S) having 450 m² HSA each and Forced Circulation type Evaporators (1W+1S) having 650 m² HSA each.</p>
2	Bio-digester	Three nos. CSTR type Bio-digesters of capacity 2x10000 M ³ and 1x7500 M ³ are provided for bio-methanation.
3	Spray Dryer	Two nos. Rotating Disk type Spray Dryer of capacity 45 TPD each are provided for drying concentrated bio-methanated spent wash

4	Lagoon	One no. of lagoon of total capacity 1925 m ³ is available for storage of concentrated spent wash.
5	Condensate Polishing Unit (CPU)	Conventional (Anaerobic/ Aeration/ MGF/ ACF) CPU of capacity 1050 KLD is provided for treatment of process condensate and other low strength effluents.

9. STEAM AND POWER GENERATION

The steam and power requirement for distillery are being met out through sugar mill boiler of capacity 30 TPH (32 kg/cm² and 400°C) integrated with back pressure type turbine of capacity 3 MW.

10. FRESH WATER MANAGEMENT SYSTEM

The raw water requirement of approximately 250-300 m³/day for the plant is being met by one borewell located in sugar premises. The water balance of distillery as reported by the factory is attached as **Annexure 16**. The distillery has applied for the NOC for ground water abstraction from CGWA, which is enclosed as **Annexure 17**. The up-stream and down-stream water analysis reports are also attached as **Annexure 18**. Records of fermenter sludge generation and disposal is enclosed as **Annexure 19**.

11. OBSERVATIONS ON PHYSICAL PARAMETERS

S. No	Particulars	Actual in the unit
1.	Spent wash Generation l/l alcohol	About 6.0 litre/ litre of alcohol (three months average)
2.	Concentration of spent wash up to 36-38 % solids and spray dryer	Concentrated bio-methanated spent wash is being dried through spray dryers
3.	On line flow meters with data recording facility which should be transmitted online to CPCB and SPCB shall be installed at the raw spent wash/whole still age generation line, MEE feed and MEE concentrate	Online flow meters with data recording facility have been installed as per details at <i>para 12</i> .
4.	Cameras (IP) with PAN, Tilt zoom <i>etc.</i> to be installed at relevant locations of final spent wash lagoon storage/ concentrated spent wash storage tank	One no. camera is provided at Concentrated SW storage lagoon and MEE area as per details at <i>para 12</i> and are connected with CPCB and UKPCB servers.
5.	Boiler should have online continuous	Online SPM analyzer has been installed.

	stack emission monitoring system	
6.	Mass flow meters at the inlet and outlet of the MEE	Mass flow meter has been installed at the outlet of Distillation section. Mass flow meters have been provided at the feed and outlet of the MEE.
7.	ZLD system	The distillery has adopted spray drying route to achieve ZLD through Bio-methanation followed by MEE + Spray Dryer & Conventional CPU System for recycling of condensate and other low strength effluents.

12. ONLINE MONITORING SYSTEM

Details of Online PTZ Cameras & Flow Meters:

Location / Place Installed	Parameter monitored	Device Make & Serial No./ Device ID	Device Model	Device Vendor	System Certified	Certified Agency	Range
Lagoon and MEE area	PTZ Camera	Hikvision 103.66.74.2 13:83	DS- 2DE7A225 IW-AEB	Mozilla Firebox	NA	NA	NA
Spent Wash Generation	Mass flow meter	ABB	FCB430	Aaxis Nano Technologies Pvt. Ltd.	Yes	ABB	0- 32000 Kg/Hr
MEE Feed-Old Plant	Mass flow meter	ABB 244367863/ X002/0070 8	FCB430	Aaxis Nano Technologies Pvt. Ltd.	Yes	ABB	0- 42850 kg/hr
MEE Concentrate-Old Plant	Mass flow meter	ABB 244327875/ X00210070 8	FCB430	Aaxis Nano Technologies Pvt. Ltd.	Yes	ABB	0- 21000 kg/hr
MEE Feed-New Plant	Mass flow meter	ABB X001/0094 79	FCB430	Aaxis Nano Technologies Pvt. Ltd.	Yes	ABB	0- 35000 kg/hr
MEE Concentrate-New Plant	Mass flow meter	ABB X002/0094 80	FCB430	Aaxis Nano Technologies Pvt. Ltd.	Yes	ABB	0- 26000 kg/hr

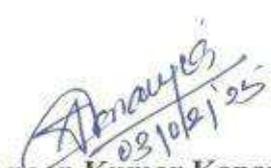
The photographs of MEE plant, CPU, Lagoon, Spray-dryer, Mass flow meters at the feed and outlet of MEE, PTZ cameras at Lagoon *etc.* are being attached as **Annexure 20**.

13. RECOMMENDATIONS & CONCLUSIONS

- (i) M/s Rai Bahadur Narain Singh Sugar Mills Ltd. (Distillery Division), Laksar, Haridwar, Uttarakhand is having a molasses-based distillery of licensed capacity of 120 KLPD. The factory has adopted spray drying route to achieve ZLD through Bio-methanation followed by MEE + Spray Dryer & Conventional CPU System for recycling of condensate and other low strength effluents.
- (ii) The factory has three nos. CSTR type Bio-digesters for bio-methanation. The bio-methanated spent wash is being sent to Multiple Effect Evaporator (MEE) system to concentrate upto 36-38 brix and then concentrated bio-methanated spent wash is being used in spray dryers so as to comply with CPCB norms to achieve Zero Liquid Discharge (ZLD) through spray drying route.
- (iii) The factory has also provided the granulation unit along with the spray drying system to achieve ZLD. However, the unit may enter into formal agreement with other vendors/ growers for its safe disposal & utilization. The factory may also obtain the analysis report of spray dryer powder/ granules from the external agency.
- (iv) The installed capacity of conventional Condensate Polishing Unit (CPU) system shall be sufficient to handle the MEE condensate & other low strength effluents (Spent lees and Cooling tower blow down *etc.*) at production capacity of 120 KLPD of RS/ENA/Ethanol. However, the factory may explore the possibilities to provide RO & UV system for better utilization of treated water of CPU, if required.
- (v) Air Pollution Control (APC) system *i.e.* Wet Scrubber and OCEMS provided for emission control and monitoring system shall be sufficient to cope up with production capacity of 120 KLPD of RS/ENA/Ethanol.
- (vi) The factory has provided the PTZ camera to cover the MEE/ lagoon area. The available PTZ camera(s) may be re-located from bio-compost yard to cover the area of spray drying of bio-methanated spent wash.
- (vii) The factory has provided one no. of lagoon of total capacity 1925 m³ for storage of concentrated spent wash.
- (viii) The factory has provided necessary Mass flow meters with data recording facility for MEE feed and MEE concentrate and have been connected with the CPCB/ SPCB servers for transmitting data. The online stack monitoring system has also been commissioned and connected with the CPCB/ SPCB servers for transmitting data.

14. ACKNOWLEDGEMENTS

The undersigned is thankful to all the technical and other staff of the factory for extending necessary assistance during the period of investigation.


(Anoop Kumar Kanaujia)

Asst. Professor (Sugar Engineering)

NATIONAL SUGAR INSTITUTE

(Government of India)

Ministry of Consumer Affairs, Food & Public Distribution

Department of Food & Public Distribution

Kanpur- 208017 (U.P.) India



क्षेत्रीय कार्यालय
उत्तराखण्ड प्रदूषण नियंत्रण बोर्ड
सिंचाई परिकल्प भवन परिसर, रुड़की -247667 हरिद्वार



पत्रांक-यूकेपीसीबी/आर0ओ0आर0/सा0-147(54)/2024/995

दिनांक: 29.09.2024

पंजीकृत डाक द्वारा

सेवा में,

सदस्य सचिव महोदय,
उत्तराखण्ड प्रदूषण नियंत्रण बोर्ड,
देहरादून।

विषय:- मा0 एन0जी0टी0 में योजित मूल आवेदन सं0- 530/2023, अनुज कुमार बनाम उत्तराखण्ड राज्य व अन्य में पारित आदेश के अनुपालन के सम्बन्ध में।

महोदय,

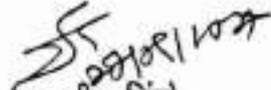
कृपया उपरोक्त विषयक मा0 एन0जी0टी0 में योजित मूल आवेदन सं0- 530/2023 अनुज कुमार बनाम उत्तराखण्ड राज्य व अन्य में मा0 एन0जी0टी0 द्वारा पारित आदेश दिनांक 29.07.2024 का सन्दर्भ लेना चाहें।

उक्त आदेश के बिन्दु सं0- 14 के अनुपालन में इस कार्यालय द्वारा मै0 आर0वी0एन0एस0 शुगर मिल लि0, लक्सर के परिसर एवं बाहर से भू-गर्भीय जल नमूने मान्यता प्राप्त प्रयोगशाला से विश्लेषित कराये गये हैं।

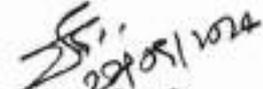
जल नमूनों की विश्लेषण आख्याएँ संलग्न कर आपके अवलोकनार्थ एवं अग्रिम कार्यवाही हेतु संलग्न कर प्रेषित की जा रही है।

संलग्नक:- यथोपरि।

भवदीय,


(एस0पी0 सिंह)
क्षेत्रीय अधिकारी

प्रतिलिपि:- डा0 राजेन्द्र सिंह, वैज्ञानिक अधिकारी/प्रभारी उत्तराखण्ड प्रदूषण नियंत्रण बोर्ड, देहरादून कोर्ट सेल को अग्रिम कार्यवाही हेतु प्रेषित।


क्षेत्रीय अधिकारी



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TEST CERTIFICATE

Issued to: - M/s Uttarkhand Pollution Control Board.

Address: - Sichayi Parikalp Bhawan Canal Road, Roorkee, Haridwar, 247667, Uttarakhand

Report Code : W-160824-06

Test Report of : Water

Service Request No : NTL/SRF/08/24-04

Service Request Date : 14/08/2024

Report Issue Date : 20/08/2024

SAMPLING & ANALYSIS DATA

Sample Drawn On : 16/08/2024

Sample Drawn By : NTL Representative

Sample Quantity : 2.0 lit + 0.5 lit

Sample packing Details : In Sealed Plastic Bottle & Glass Bottle

Sample Description : **Borewell -1**

Sampling Location : **RBNS Sugar mills**

Analysis Duration : 16/08/2024 to 20/08/2024

RESULTS

Essential test as per IS:10500-2012

S. No.	Parameter	Test Method	Results	Units	Desirable Limit	Extended Limit
A-General and Core Parameters:						
1.	Conductivity	IS-3025(P-14)	1030.0	uS/cm	NSL	NSL
2.	Colour	IS-3025(P-4)	BDL(<1.0)			
3.	pH	IS:3025(Part-11)	7.23	-	6.0 - 9.0	No Relaxation
4.	Total Dissolve Solid(TDS)	IS-3025(P-16)	450.0	mg/l	500	2000
5.	Alkalinity (as Ca CO ₃)	IS: 3025 (P- 23)	180.0	mg/l	200	600
6.	Total Hardness (as CaCO ₃)	IS:3025(Part-21)	170.0	mg/l	200	600
7.	Chloride (as Cl)	IS:3025(Part-32)	30.0	mg/l	250	1000
8.	Nitrate (as NO ₃)	IS: 3025 (P- 34)	4.50	mg/l	45	No Relaxation
9.	Sulphate (as SO ₄)	IS: 3025 (P- 24)	38.0	mg/l	200	400
10.	Phosphate (as P)	IS: 3025 (P- 31)	BDL(<0.1)	mg/l	NSL	NSL
11.	Fluoride (as F)	IS: 3025 (P-60)	0.22	mg/l	1.0	1.5
12.	Chemical Oxygen demand (as O ₂)	APHA 5220 B:2005	BDL(<4.0)	mg/l	NSL	NSL

BDL-Below Detection Limit, NSL-No Specified Limit.

Notes:

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- The test samples will be disposed of after two weeks from the date of issue of test report, unless until specified by the customer

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Branch Office :

HARIDWAR | RUDRAPUR | CHANDIGARH | DEHRADUN | PUNE

E.: noida.laboratory@gmail.com, info@noidalabs.com W.: www.noidalabs.com



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TEST CERTIFICATE

Issued to: - M/s Uttarkhand Pollution Control Board.

Address: - Sichayi Parikalp Bhawan Canal Road,
Roorkee, Haridwar, 247667,
Uttarakhand

Report Code : W-160824-08
Test Report of : Water
Service Request No : NTL/SRF/08/24-04
Service Request Date : 14/08/2024
Report Issue Date : 20/08/2024

SAMPLING & ANALYSIS DATA

Sample Drawn On : 16/08/2024
Sample Drawn By : NTL Representative
Sample Quantity : 2.0 lit + 0.5 lit
Sample packing Details : In Sealed Plastic Bottle & Glass Bottle
Sample Description : Hand Pump Water (GW-3)
Sampling Location : RBNS 3-km Pipli
Analysis Duration : 16/08/2024 to 20/08/2024

RESULTS

Essential test as per IS:10500-2012

S. No.	Parameter	Test Method	Results	Units	Desirable Limit	Extended Limit
A-General and Core Parameters:						
1.	Colour	IS:3025(Part-4)	<1.00	Hazen	5	15
2.	Conductivity	IS-3025(P-14)	930.0	µS/cm	NSL	NSL
3.	pH	IS:3025(Part-11)	7.15	-	6.0 – 9.0	No Relaxation
4.	Total Dissolve Solid(TDS)	IS-3025(P-16)	480.0	mg/l	500	2000
5.	Alkalinity (as Ca CO ₃)	IS: 3025 (P- 23)	140.0	mg/l	200	600
6.	Total Hardness (as CaCO ₃)	IS:3025(Part-21)	180.0	mg/l	200	600
7.	Chloride (as Cl)	IS:3025(Part-32)	18.0	mg/l	250	1000
8.	Nitrate (as NO ₃)	IS: 3025 (P- 34)	5.20	mg/l	45	No Relaxation
9.	Sulphate (as SO ₄)	IS: 3025 (P- 24)	24.0	mg/l	200	400
10.	Phosphate (as P)	IS: 3025 (P- 31)	BDL(<0.1)	mg/l	NSL	NSL
11.	Fluoride (as F)	IS: 3025 (P-60)	0.18	mg/l	1.0	1.5
12.	Chemical Oxygen demand (as O ₂)	APHA 5220 B:2005	BDL(<4.0)	mg/l	NSL	NSL

BDL-Below Detection Limit, NSL-No Specified Limit.

Notes:

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Laboratory : GT-20, Sector-117, NOIDA, Gautam Budh Nagar - 201301

Branch Office :

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TEST CERTIFICATE**Issued to: - M/s Uttarkhand Pollution Control Board.****Address: - Sichayi Parikalp Bhawan Canal Road, Roorkee, Haridwar, 247667, Uttarakhand****Report Code : W-160824-09**
Test Report of : Water
Service Request No : NTL/SRF/08/24-04
Service Request Date : 14/08/2024
Report Issue Date : 20/08/2024**SAMPLING & ANALYSIS DATA**

Sample Drawn On : 16/08/2024
 Sample Drawn By : NTL Representative
 Sample Quantity : 2.0 lit + 0.5 lit
 Sample packing Details : In Sealed Plastic Bottle & Glass Bottle
 Sample Description : **Hand Pump Water (GW-4)**
 Sampling Location : RBNS 5km near bye sultanpur
 Analysis Duration : 16/08/2024 to 20/08/2024

RESULTS

Essential test as per IS:10500-2012

S. No.	Parameter	Test Method	Results	Units	Desirable Limit	Extended Limit
A-General and Core Parameters:						
1.	Colour	IS:3025(Part-4)	<1.00	Hazen	5	15
2.	Conductivity	IS-3025(P-14)	945.0	uS/cm	NSL	NSL
3.	pH	IS:3025(Part-11)	7.10	-	6.0 – 9.0	No Relaxation
4.	Total Dissolve Solid(TDS)	IS-3025(P-16)	460.0	mg/l	500	2000
5.	Alkalinity (as Ca CO ₃)	IS: 3025 (P- 23)	170.0	mg/l	200	600
6.	Total Hardness (as CaCO ₃)	IS:3025(Part-21)	180.0	mg/l	200	600
7.	Chloride (as Cl)	IS:3025(Part-32)	28.0	mg/l	250	1000
8.	Nitrate (as NO ₃)	IS: 3025 (P- 34)	4.20	mg/l	45	No Relaxation
9.	Sulphate (as SO ₄)	IS: 3025 (P- 24)	25.0	mg/l	200	400
10.	Phosphate (as P)	IS: 3025 (P- 31)	BDL(<0.1)	mg/l	NSL	NSL
11.	Fluoride (as F)	IS: 3025 (P-60)	0.15	mg/l	1.0	1.5
12.	Chemical Oxygen demand (as O ₂)	APHA 5220 B:2005	BDL(<4.0)	mg/l	NSL	NSL

BDL-Below Detection Limit, NSL-No Specified Limit.**Notes:**

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TEST CERTIFICATE**Issued to: - M/s Uttarkhand Pollution Control Board.****Address: - Sichayi Parikalp Bhawan Canal Road, Roorkee, Haridwar, 247667, Uttarakhand****Report Code : W-160824-010**
Test Report of : Water
Service Request No : NTL/SRF/08/24-04
Service Request Date : 14/08/2024
Report Issue Date : 20/08/2024**SAMPLING & ANALYSIS DATA**

Sample Drawn On : 16/08/2024
 Sample Drawn By : NTL Representative
 Sample Quantity : 2.0 lit + 0.5 lit
 Sample packing Details : In Sealed Plastic Bottle & Glass Bottle
 Sample Description : **Hand Pump Water (GW-2)**
 Sampling Location : RBNS Kacheri
 Analysis Duration : 16/08/2024 to 20/08/2024

RESULTS

Essential test as per IS:10500-2012

S. No.	Parameter	Test Method	Results	Units	Desirable Limit	Extended Limit
A-General and Core Parameters:						
1.	Colour	IS:3025(Part-4)	<1.00	Hazen	5	15
2.	Conductivity	IS-3025(P-14)	738.0	uS/cm	NSL	NSL
3.	pH	IS:3025(Part-11)	7.18	-	6.0 – 9.0	No Relaxation
4.	Total Dissolve Solid(TDS)	IS-3025(P-16)	443.0	mg/l	500	2000
5.	Alkalinity (as Ca CO ₃)	IS: 3025 (P- 23)	136.0	mg/l	200	600
6.	Total Hardness (as CaCO ₃)	IS:3025(Part-21)	176.0	mg/l	200	600
7.	Chloride (as Cl)	IS:3025(Part-32)	38.0	mg/l	250	1000
8.	Nitrate (as NO ₃)	IS: 3025 (P- 34)	2.20	mg/l	45	No Relaxation
9.	Sulphate (as SO ₄)	IS: 3025 (P- 24)	20.0	mg/l	200	400
10.	Phosphate (as P)	IS: 3025 (P- 31)	BDL(<0.1)	mg/l	NSL	NSL
11.	Fluoride (as F)	IS: 3025 (P-60)	0.14	mg/l	1.0	1.5
12.	Chemical Oxygen demand (as O ₂)	APHA 5220 B:2005	BDL(<4.0)	mg/l	NSL	NSL

BDL-Below Detection Limit, NSL-No Specified Limit.

Notes:

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Arjari

Laboratory : GT-20, Sector-117, NOIDA, Gautam Budh Nagar - 201301

Branch Office :

HARIDWAR | RUDRAPUR | CHANDIGARH | DEHRADUN | PUNE

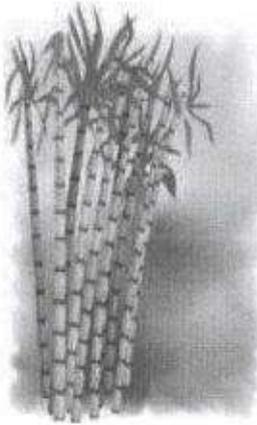
E.: noida.laboratory@gmail.com, info@noidalabs.com W.: www.noidalabs.com

**REPORT ON VALIDATION OF
ETP PERFORMANCE**

FOR

**M/s RAI BAHADUR NARAIN SINGH SUGAR MILLS LTD.
(SUGAR DIVISION)
LAKSAR, HARIDWAR - 247663
UTTARAKHAND**

PREPARED BY:



**राष्ट्रीय शर्करा संस्थान
NATIONAL SUGAR INSTITUTE**

भारत सरकार

Government of India

उपभोक्ता मामले खाद्य एवं सार्वजनिक वितरण, मंत्रालय
Ministry of Consumer Affairs, Food & Public Distribution

खाद्य एवं सार्वजनिक वितरण विभाग

Department of Food & Public Distribution

कानपुर-208017 (उत्तर प्रदेश) भारत

Kanpur- 208017 (U.P.) India

Ph. +91-512-2570730, 2570273

E-mail: nsikanpur@nic.in

1. GENERAL INFORMATION

1	Name and address of the factory	M/s Rai Bahadur Narain Singh Sugar Mills Ltd. (Sugar Division), Laksar, Haridwar- 247663 Uttarakhand	
2	Standalone/ integrated (with co-generation) Sugar/ Sugar refinery	Integrated with Co-generation Plantation White Sugar	
3	License capacity of Sugar Mill (TCD)	10,000 TCD	
4	Average actual crush rate (TCD)	9589 TCD (Avg. from 20.12.2024 to 03.01.2025)	
5	Co-generation plant capacity (MW)	29.6 MW	
6	ETP installed capacity (KLPD)	2500 KLPD	
7	Date/ Period of visit	04 th January, 2025	
8	Assessing officials	Designation	Contact No. & E-mail
	1. Dr. Seema Paroha	Director, NSI Kanpur	
	2. Shri Anoop Kumar Kanaujia	Asst. Professor (Sugar Engineering)	9412583036 akk.nsi@gmail.com
9	Factory officials consulted	Designation	Contact No. & E-mail
	1. Shri S. P. Singh	Unit Head	7830778880
	2. Shri Ranbir Singh	Sr. D.G.M. (Production)	8077757035

2. INTRODUCTION

M/s Rai Bahadur Narain Singh Sugar Mills Ltd. (Sugar Division), Laksar, Haridwar vide letter no. GM/01/IC/369 dt. 26.12.2024 approached National Sugar Institute, Kanpur for inspecting their modified ETP being attached to 10,000 TCD sugar plant and to submit report on its validation keeping in view CPCB/ SPCB guidelines related to sugar factories.

3. OPERATIONAL INFORMATION

S. NO.	PARTICULAR	STATUS/ QUANTITY	REMARK
1	Fresh water abstraction		
	a. No & capacity of bore well	01 no. Capacity- 180 m ³ /hr	
	Installation of flow meters	Yes	
	b. Recording & maintaining of log books of water abstraction	340 KLD	Logbook details attached as Annexure - 01
	c. Measurement facility of fresh water used in sugar plant & maintaining of log books	16 KLD	c=b-d-e
	d. Measurement facility of fresh water used at co-generation & maintaining of log books	287 KLD	Logbook details attached as Annexure - 02
	e. Measurement facility of fresh water used for human needs, residential buildings & maintaining of log books	36 KLD	Logbook details attached as Annexure - 03
	f. Total fresh water Consumption (Industrial)	304 KLD 31.7 Lit/tonne of cane	
2	Measurement of Cold-water usage		
	a. Power turbine	Flow meter available	Logbook details attached as Annexure - 04
	b. Fibrizer & other cane preparatory devices		
	c. Mills & drives		
	d. DM/RO plant at boilers	Flow meter available	Logbook details attached as Annexure - 02
	e. Cooling towers of co-generation	-	-
	f. SO ₂ gas cooling	Flow meter available	Logbook details attached as Annexure - 04
	g. B & C massecuite cooling	-	-
	h. Final molasses cooling	-	-
3	Measurement of Hot water usage		
	a. Imbibition water at mills	Flow meter available	Logbook details attached

			as Annexure - 04
	b. Filter cake wash water	Flow meter available	Logbook details attached as Annexure - 04
	c. Pan boiling, molasses conditioning	Flow meter available	Logbook details attached as Annexure - 04
	d. Wash water at centrifugals	Flow meter available	Logbook details attached as Annexure - 04
	e. Excess condensate taken into CPU	Flow meter available	Logbook details attached as Annexure - 05
4	Measurement of effluent generation		
	a. From mill house	665 KLD	Logbook details attached as Annexure - 06
	b. From boiling house		
	c. From steam generation		
	d. Spray pond/ Cooling tower over flow	385 KLD	
	e. Gross effluent generation at ETP inlet	1050 KLD (109.5 Litre per ton of cane @ 9589 TCD)	Logbook details attached as Annexure - 06
	f. ETP outlet	1035 KLD (108.0 Litre per ton of cane @ 9589 TCD)	Logbook details attached as Annexure - 06
5	Cooling arrangement & recirculation of cooling water		
	a. Power turbine	One no. fan-less cooling tower of 500 m ³ /hr capacity	Cold Water UGR- 250+625+495 m ³
	b. Mill drives & mill bearings		
	c. Fibrizer & other cane preparatory devices		
	d. B & C massecuite cooling		
	e. SO ₂ gas coolers		
	f. Surplus condensate	Two nos. fan-less cooling tower of 50 M ³ /hr capacity each	Hot Water UGR- 2x245 m ³
6	Construction of small pits near various pumps to collect gland cooling water for recirculation.	Small pits have been constructed.	
7	Construction of Hazardous tanks of adequate capacity to collect wash water generated during chemical/mechanical cleaning of evaporators and discharging it in a controlled manner.	Hydrojet + Chemical Cleaning	Hazardous tank capacity 1x100 m ³ and 2x25 m ³
8	Installation of CPU (Condensate Polishing Unit) and circulation of	Part of Excess condensate is being	CPU flow diagram attached as Annexure - 07

	polished condensate to co-generation plant cooling towers as a make-up water for more than 45 kg/cm ² working pressure boilers and to other purposes.	treated in CPU of adjacent distillery unit.	Logbook details attached as Annexure - 05
9	Use of membrane based (2 stage) or other suitable technologies to attain a brine recovery of at least 80 % in sugar refineries having IER.	-	Not Applicable
10	Closed loop hot and cold-water circulation systems.	Yes	Details attached as Annexure - 08
11	Sulphate removal system installed for spray pond/ process CT over flow. (System details with flow diagram to be enclosed)	Spray pond overflow treatment using conventional scheme followed by common treatment.	Flow diagram attached as Annexure - 09
12	Retention/contact time in various units of ETP	Retention time (At installed capacity i.e. 10,000 TCD @ 109.5 liters/ ton of cane)	Remark
	a. Bar screen chamber	-	Provided in inlet gutter itself
	b. Oil & grease trap chamber	42 mins	Marginally Adequate
	c. Equalization tank with aeration	9.6 hrs	Adequate; diffused aeration provided
	d. Primary clarifier	9.6 hrs	Adequate
	e. Aeration tank	32.6 hrs	Adequate; surface aeration provided
	f. Secondary clarifier	17.2 hrs	Adequate
	g. Multi grade filter	5.3 m ³ /m ² /hr	Adequate
	h. Activated carbon filter	5.3 m ³ /m ² /hr	Adequate
	i. Sludge drying bed or Centrifuge or Filter press	0.09 m ² /ton of cane	Adequate
13	ETP Analysis (performance parameters), average value	As per record	As per sample taken during the visit
A	ETP Inlet		
	a. Generated effluent flow rate (m ³ /hr)	43.7 m ³ /hr (109.5 liters/ ton of cane)	
	b. pH	7.4	6.9
	c. COD (mg/L)	462	672

	d. BOD (mg/L)	144	232
	e. TSS (mg/L)	104	186
	f. TDS (mg/L)	-	680
B	ETP Outlet		
	a. Treated effluent flow rate (m ³ /hr)	43.1 m ³ /hr (108.0 liters/ ton of cane)	
	b. pH	7.86	7.4
	c. COD (mg/L)	56	80
	d. BOD (mg/L)	18.3	24
	e. TSS (mg/L)	22.8	26
	f. TDS (mg/L)	-	562
C	ETP Analysis (other parameters), average value		
	a. MLSS (mg/L)	2500	2250
	b. DO (mg/L)	-	2.6
D	Sulphate removal system analysis		
	Inlet		
	a. Effluent flow rate (KLD)	385 KLD	
	b. Sulphur (mg/L)	-	540
	Outlet		
	a. Effluent flow rate (KLD)	-	Common treatment
	b. Sulphur (mg/L)	-	210
14	Condensate Polishing Unit (CPU) Analysis		
	Inlet		Part of Excess condensate is being treated in CPU of adjacent distillery unit. Logbook details attached as Annexure - 05
	TDS (mg/L)	755	
	BOD (mg/L)	1080	
	Outlet		
	TDS (mg/L)	75	
	BOD (mg/L)	25	
15	Storage of treated effluent		
	a. No & size of lagoons	Two nos. of capacity 3500 m ³ + 542 m ³	Retention time is approx. 04 days.
	b. Lagoon type- permeable/ impermeable	Impermeable	
16	Recirculation of treated effluent in sugar plant		
	Consumption points	Quantity consumed (m³/hr)/ % cane	Measured/Estimated
	a. To TTP of distillery unit	50 m ³ /day	Estimated quantity
	b. To irrigation	360 m ³ /day	Estimated quantity

17	Operation and maintenance staff of ETP		
	Details	Qualification	
	Mgr. Q. C.- 01 ETP Incharge- 01 ETP Chemist- 04 ETP Operator- 03 ETP Helper- 04	Details attached as Annexure - 10	
		Status	Remark
18	Analytical facility (laboratory)	Yes	Analysed at sugar plant laboratory
19	Adoption of rainwater harvesting system	Not applicable	
20	Dry cleaning of factory floors etc. using bagasse	Adopted	

4. DOCUMENTS/ INFORMATION ATTACHED

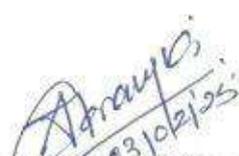
S. No.	Particulars	Annexure No.
1	DMR copy for 20.12.2024 to 03.01.2025 for crushing season 2024-25	11
2	Photocopy of data recorded on log books of fresh water abstraction and consumption	01, 02 & 03
3	Recorded laboratory Analysis Report of ETP Parameters carried out by the factory	06
4	ETP performance report carried out by external laboratory	12
5	OCEMS recorded data e.g. flow rate, pH, COD, BOD, TSS etc. sent on CPCB server during the visit	13
6	Calibration Certificate of Flow meters and OCEMS	14
7	ETP details with flow diagram	15
8	Process flow diagram	16
9	Material/ Water balance calculation submitted by the factory	17
10	Status of consents & authorization from SPCB	18
11	NOC from Central Ground Water Authority (CGWA) -Applied	19
12	On-line Stack Monitoring Report	20

5. CONCLUSION

- (i) Necessary flow meters are installed at major unit operations *e.g.* pan boiling & centrifugals washing, filter cake washing *etc.* to ascertain and control hot and cold-water requirement.
- (ii) The capacity of the ETP plant shall be adequate to handle the generated effluent from the plant at the installed capacity of 10,000 TCD. However, bar screen chamber and diffused aeration in place of surface aeration in aeration tank may be provided to further improve the performance of ETP.
- (iii) The effluent discharge through ETP is 108.0 liters/ ton cane as per flow meter reading, which is considered to be in order as per CPCB guidelines.
- (iv) As per the analytical details submitted by the factory and also observed that the treated effluent quality was in conformity with the CPCB guidelines in the matter.
- (v) The factory requires to carry out the regular analysis of ETP inlet/outlet, SRS inlet/outlet, Lagoon water for various parameters *viz.* TSS, TDS, BOD and COD *etc.*

6. ACKNOWLEDGEMENTS

The undersigned is thankful to all the technical and other staff of the factory for extending necessary assistance during the period of investigation.


(Anoop Kumar Kanaujia)

Asst. Professor (Sugar Engineering)

NATIONAL SUGAR INSTITUTE
(Government of India)
Ministry of Consumer Affairs, Food & Public Distribution
Department of Food & Public Distribution
Kanpur- 208017 (U.P.) India

REPORT ON UTILIZATION OF TREATED EFFLUENT FOR IRRIGATION PURPOSE

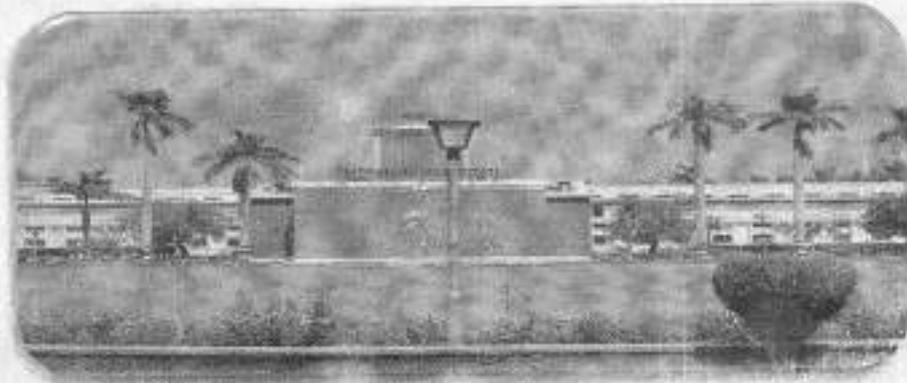
उपचारित उत्सर्जन के सिंचाई में उपयोग हेतु रिपोर्ट

FOR

M/s Rai Bahadur Narain
Singh Sugar Mills Ltd. Laksar
District Haridwar (Uttarakhand)

मेसर्स राय बहादुर नारायण सिंह शुगर
मिल्स लिमिटेड लक्सर जिला हरिद्वार,
उत्तराखंड

PREPARED BY:
द्वारा निर्मित :



NATIONAL SUGAR INSTITUTE

राष्ट्रीय शर्करा संस्थान

Government of India

भारत सरकार

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खाद्य एवं सार्वजनिक वितरण विभाग

Kanpur- 208 017 (U.P.) India

कानपुर, 208017 (उ.प्र.) भारत

Ph. +91-512-2570730, 2570273

Fax. +91-512-2570247

1. Introduction of factory:

1.1 Name: **M/s R.B.N.S. Sugar Mills Ltd. Laksar District Haridwar (Uttarakhand)**

1.2 Installed capacity: 10,000 TCD (Double Sulphitation Plant)

Factory Performance:

S. No.	Particulars	2020-21	2021-22	2022-2023	2023-2024
1.	Duration of season (days)	165	186	195	125
2.	Average sugarcane crushed per day (TCD)	7850	7836	8497	6923
3.	Total sugarcane crushed (Qtls)	12953207.49	14574925.36	16569544.72	8654153.03

1. Visit Under taken :-

The Factory was visited on 09-11th April, 2024 by Dr. Ashok Kumar, Assistant Professor Agriculture Chemistry and Shri Sharad Babu, Senior Technical Assistant (Sugar Technology). Factory officials present during Visit was Shri S. P. Singh, Unit Head, Dr. B. S. Tomar, G.M. (Cane), Shri Ranbir Singh, Senior G.M (Process) and Shri Bhuvnesh kumar singh, Manager (Environment & ETP) were present during the visit.

2. Observation & Discussions:-

ETP validation of already done of **M/s R.B.N.S. Sugar Mills Ltd. Laksar** and a separate visit was paid by the NSI officials on 9-10th April, 2024.

3. **Effluent Generation:** Copies of analysis reports of treated effluent and data communicated to CPCB server are **attached as Annexure-I.**

Existing arrangement of treatment: Details of different units of ETP (till date) with capacity & dimensions are **attached as Annexure-II.**

4. **Storage lagoon:** Total Capacity = 8000 M³ of storage lagoon out of which 3500 M³ (Already Constructed) + 4500 M³(Under construction) attached **as Annexure-III.**

5. **Cropping pattern of the area:** Sugar cane is grown as cash crop at command area of 40000 Hectare.

6. Quantity of effluent available for land application (KL/day):

- a. Installed capacity of factory is 10000 TCD (Working at Average Crushing rate of 8000 TCD).
- b. Estimated average Effluent generation per day @200 liters/ton of cane crushed -1600 KL/day
- c. Net effluent generation left for irrigation- 910 KL/day.
As factory is using 690 KL/day as recirculation and other process use.
Undertaking Attached as Annexure-IV
- d. Total treated effluent generated (left for irrigation) by highest crushing for 195 days = 910 X 195 = 1,77,450 KL/Crushing Season

6. Characteristics of treated effluent:

S. No.	Particular	Average values (2023-2024) till 31 st March, 2024
1.	pH	7.86
2.	BOD (mg/liter)	16.93
3.	COD (mg/liter)	70.92
4.	TSS (mg/liter)	16.06

The above average values are as per data transmitted from **M/s R.B.N.S. Sugar Mills Ltd. Laksar** to CPCB server through real time monitoring system during crushing season during November, 2023 to 31st March, 2024. It was also observed that all the parameters were under control as per norms of CPCB. The copies are enclosed as **Annexure-I**.

8. Command area:

S. No.	Soil texture	Effluent loading rate(KL/hectare/day)
1	Sandy loam	170-225(average 197m ³ /hectare/day or say 200m ³ / hectare /day)

On the basis of soil test report, the Soil of the command area of factory is sandy loam.

9. Command area identified:

S.No.	Total available area (hectare)	Area available at 70% land efficiency (Hectare)	Distance from unit (km)	Mode of Effluent Transport
1.	12 Green Belt Area (Factory farm, lawn and green belt)	8.4	Within-Inside Factory	Through PVC Pipes
2.	(104.91) Farmers' Land	73.4	Within to 1 K.M.	Through PVC & Flexible Pipes
3.	11 Factory's Own Farm	7.7	Within 1 K.M.	Through PVC & Flexible Pipes
	Total = 127.91	89.50		

Details list of treated effluent used for irrigation purpose by cane farmers with farmer's name, area, village and crops cultivated are attached as Annexure-V.

10. Details of crop area:

S. No.	Location/ Village	Total available area (hectare)	Crop area under effluent application (hectare)		
			Kharif	Rabi	Annual
1.	Factory farm, lawn and green belt	12	-	-	-
2.	Farmers' Land	104.91	-	30 (Wheat)	74.91 (Sugarcane)
3.	Factory's own farm	11	-	-	11 (Sugarcane)
	Total	127.91	-	30	85.91

11. Yearly total treated water balance with respect to land available for irrigation for different crops keeping in view of the loading rates for different soil textures:

S. No.	Land Particular	Area (Hect.)	Area available at 70 % land efficiency (Hect.)	Water Loading	Irrigation interval (days)	Average Crushing days	Water Requirement KL/annum
1.	Factory farm, lawn and green belt	12	8.4	200	10	195	32,760
2.	Farmers' land (Sugarcane)	74.91	52.44	200	15	195	1,36,344
3.	Farmers' land (Wheat)	30	21	200	25	195	32,760
3.	Factory's own farm	11	7.7	200	15	195	20,020
						Total	2,21,884

As discussed in the previous paragraphs even after considering effluent generation @200 liter/ton of cane, the estimated total effluent generation shall be about 1,77,000 KL/crushing season. Thus, the generated effluent from the factory is expected to completely utilized in irrigation as per the plan submitted by the factory.

12. Effluent application scheme:

- A. Storage and transportation:** M/s R.B.N.S. Sugar Mills Ltd. has Lagoon with a capacity of 3500 cubic meters from where treated effluent is transmitted through MS/PVC pipeline up to the boundary of the factory and a lagoon with 4500 M³ is under construction. From PVC/MS pipeline, treated effluent is transported to the farmers' field. With the help of flexible pipe connected to discharge point nearby farmer's field irrigation is carried out at the desired field. The schematic diagram of supply of treated effluent to farmers is attached as **Annexure-VI**.
- B. Irrigation schedule & plan of the command area:** The treated effluent is available from November to April depending upon the duration of crushing season which is generally below 195 days. The irrigation plan and schedule of M/s R.B.N.S. Sugar Mills Ltd., Laksar is attached as **Annexure-VII**. In command Area of M/s R.B.N.S. Sugar Mills Ltd., Laksar., intensive sugarcane cultivation is practiced by farmers. Sugarcane is a crop which requires water in abundant through its life span. The intensive cane

cultivation requires continuous use of water. The treated effluent provided to the farmers is a great help to them as it is available on weekly rotation schedule of the farmers. According to the weather condition of area, the farmers provide irrigation to cane field at 15 days intervals., while wheat farmers provide irrigation to wheat field at 25 days intervals.

- C. **Agreement with farmers:** The details are attached as **Annexure-VIII**.
- D. **Demonstration farm and trials:** The Cane department of the factory undertakes demonstration of Farm trials at farmers' field monthly basis to motivate the farmers of the area (Photo Attached). In each of the demonstration, large no. of the farmers of the command area participate who are imparted the knowledge about such techniques by the staff of the factory.



E. **Kishan Gosthi:** Gosthis are regularly organized on cane production by Factory's cane department. Frequency of such Gosthis was reported as follows:

S. No.	Activity	Schedule
1	Kisan Gosthis	Quarterly
2	Field trials	Monthly



13. **Basic requirement and monitoring schedule:** M/s R.B.N.S. Sugar Mills Ltd. Laksar has deputed team of four Cane staff persons under the supervision of Dr. B. S. Tomar General Manager (Cane) for regularly visits at farmer's field. Team members maintain the irrigation plan and schedule by proper monitoring round the clock during crushing season. Members of team regularly visits at farmer's field and solve the irrigation related the problems of cane farmers.
14. **Technical backup and man power deployed:** M/s R.B.N.S. Sugar Mills Ltd., Laksar has a backup of technical team with an Environment Manager in general shift along with one ETP Chemist, one ETP supervisor and one helper per shift for round the clock for proper ETP operations. One fitter and one electrician take care of ETP maintenance round the clock.
15. **Physico-chemical properties of soil:** M/s R.B.N.S. Sugar Mills Ltd., Laksar reported following details with respect to analysis of the soil of the envisaged area where treated effluent is proposed to be used for irrigation purposes. Analysis report of soil is attached as **Annexure-IX**. The analytical details are as given below:

S. No.	Particular	Average
1	pH	7.0
2	Bulk density (gm/Cc)	1.34
3	Particle density (gm/Cc)	2.70
4	Conductivity (mS/cm)	0.13
5	Porosity %	50.38
6	Soil Texture	Sandy loam
7	Sand %	79.25
8	Clay %	12.25
9	Silt %	8.50
10	Sodium (mg/kg)	11.05
11	Potassium (mg/kg)	-
12	Calcium (mg/kg)	140.03
13	P ₂ O ₅ (mg/kg)	-
14	Chloride as Cl (mg/kg)	0.05
15	CaCO ₃ (mg/kg)	16.00
16	Magnesium as Mg (mg/kg)	55.01
17	Sulfate as SO ₄ (mg/kg)	16.00

CONCLUSION:

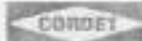
1. Data submitted & the irrigation management plan proposed by **M/s R.B.N.S. Sugar Mills Ltd., Laksar** is considered to be in order to use treated effluent for irrigation purpose for the plant and ratoon sugarcane besides it is to be utilized for the wheat crop and green belt of the factory. The available land area reported shall be adequate to cope up with the generated treated effluent even after considering operation of the sugar plant at average capacity with effluent generation @200 liters/ton of cane crushed.
2. Reports regarding compliance of effluent quality standards and status of soil and ground water quality shall have to be submitted to CPCB/UPPCB twice in a year, in first week of January and July as recommended by CPCB as guidelines for utilization of treat effluent in irrigation on dated 04.10.2019.
3. The treated effluent should meet the norms prescribed for irrigation under Environment (Protection) Rules, 1986/Consent. The effluent should also conform to Total Dissolved Solid (TDS)- 2100 mg/l and Sodium Adsorption Ratio (SAR)- preferably less than 18 but not more than 26, depending on soil/crop type.
4. Meeting the prescribed norms shall not be the only criteria for use of treated waste water in irrigation, the requirement of water for irrigation will also be a limiting condition and this depends upon various factors like Climate, Irrigation type, Soil Condition and total salt concentration etc.
5. The physico-chemical characteristics of the soil under irrigation with treated effluent, should be monitored twice in a year to assess conditions in summer and post monsoon seasons, in order to determine the deterioration of soil quality.
6. The groundwater quality should also be monitored twice in a year. Samples should be collected from the first water bearing strata from existing hand pumps or by installing the

same for sampling purpose only. The sampling points should be uniformly spread in the command area and near effluent storage area.

7. The Factory should carry out the analysis of various prescribed effluent/soil/ground water quality parameters from the NABL/EPA/CPCB/UPPCB recognised/accredited laboratories.
8. The factory may strengthen the monitoring irrigation pipeline facility to control leakage or mixing of undesirable materials (due to breakage of pipeline or other reasons) in treated effluent which may lead to undesirable colour development in treated effluent at different discharge points at farmers' field. The factory may extend the irrigation facilities further by providing pipes/channels for effective and extensive use of treated effluent.
9. Since the factory visit was undertaken during the period of non-operation when treated effluent was not available, as such, the actual assessment shall be possible during crushing only when the sugar plant will be in operation.


(Dr. Ashok Kumar)
Assistant Professor (Agril. Chemistry)

NATIONAL SUGAR INSTITUTE
Government of India
Ministry of Consumer Affairs, Food & Public Distribution
Department of Food & Public Distribution



मोतीलाल नेहरू फार्मर्स ट्रेनिंग इंस्टीट्यूट, फूलपुर इलाहाबाद
मृदा परीक्षण ... उर्वरक संस्तुति पत्र
मृदा स्वास्थ्य कार्ड

Amraa Wse - IX

प्रयोगशाला संख्या : 1126 खेत संख्या या खेत पहचान : 73 दिनांक : 26/02/2024
कृषक श्री : SAMAY SINGH पिता का नाम : राम : KEHDA
जिला : HARIDWAR फसल का नाम : धान, चावल
Rice

परीक्षण परिणाम निम्नवत् है :-

विवरण	पी.एच	ई.सी.	जीवाणु कार्बन	उपलब्ध फास्फोरस (कि.ग्रा.प्रति है.)	उपलब्ध पोटेश (कि.ग्रा.प्रति है.)
परिणाम	7.0	0.13	0.51	16	168
श्रेणी	सामान्य	सामान्य	मध्यम	न्यून	मध्यम

उर्वरक संस्तुति ... किलोग्राम प्रति हेक्टेयर

क्रमांक	फसल का नाम	तत्व के रूप में किलोग्राम प्रति हेक्टेयर			खाद के रूप में किलोग्राम प्रति हेक्टेयर ... इफको खाद					गोबर की खाद क्यू. प्रति हेक्टेयर.	
		नाइट्रोजन	फास्फोरस	पोटाश	एन.पी.के. 10:26:26	एन.पी.के. 10:32:16	डी.ए.पी. 18:46	एन.पी.के.एस	एम.ओ.पी.		यूरिया
1	गन्ना	135.0	65.0	30.00			141	0	30	238	50
2	धान, चावल	65.0	45.0	20.00			98	0	33	147	60
3	गेहूँ	90.0	45.0	25.00			98	0	42	157	60

क्षारीय भूमि सुधार हेतु जिप्सम पायराईट ... 0.00 टन प्रति हेक्टेयर का प्रयोग करें।
अम्लीय भूमि सुधार हेतु घूना ... 5.40 टन प्रति हेक्टेयर का प्रयोग करें।

सूक्ष्म पोषक तत्वों के विश्लेषण परिणाम एवं उर्वरक संस्तुति

तत्व	उपलब्ध मात्रा पी.पी.एम	श्रेणी	उर्वरक संस्तुति	किलो ग्राम प्रति हेक्टेयर	अभ्युक्ति
सींक	80.25			%	
बोरे	22.25			%	
सिल्ट	8.50			%	
ब्लक डेन्सिटी	1.34			%	
पार्टिकुल डेन्सिटी	2.70			%	
पॉरोसिटी	50.38			%	
मृदा प्रकार		बनूयी दोमट			
गंधक	16.00	अधिक		%	
लोड	16.40	अधिक		%	
मैगनीज	17.40	अधिक		%	
कोपर	1.24	अधिक		%	
जिंक	1.24	अधिक		%	
बोरॉन	1.04	अधिक		%	
कैल्शियम	140.03	मध्यम		%	
मैग्नीशियम	55.01	अधिक		%	
सोडियम	11.05	मध्यम		%	
कैल्शियम कार्बोनेट	16.0	मध्यम		%	
क्लोरोइड	0.05	मध्यम		%	

उपरोक्त के अतिरिक्त ...

मिट्टी की उपजाऊ शक्ति एवं प्रति इकाई उत्पादन क्षमता बढ़ाने के लिए निर्धारित विधि से जैव उर्वरकोंका प्रयोग आवश्यक मात्रा में अवश्य मिट्टी परीक्षण प्रयोगशाला





UTTARAKHAND POLLUTION CONTROL BOARD
Irrigation Design Building Campus, Roorkee-247667

उत्तराखण्ड प्रदूषण नियंत्रण बोर्ड
सिंचाई परिकल्प गवन परिसर, रुड़की-247667
Regional Laboratory Roorkee

Annexure-I

Industrial Waste water Characteristics

Name and Site of Sampling Point		M/s RBNS Sugar Mills Ltd Laksar, Distt- Haridwar	
Sample Collected by		1. S.P. Singh (RO) 2. Dr. Ajeet Singh (ASO)	
Date of Sampling		12/03/2024	
Sampling point		ETP Outlet	
Nature of Sample		Grab	
S.No.	Parameters	Observation	Prescribed Standard
1	Colour	Colorless	-
2	Odour	Odourless	-
3	pH	7.12	6.5-8.5
4	BOD	20	30
5	COD	110	250
6	Total Solids	340	-
7	Total Dissolved Solids	310	-
8	Total Suspended Solids	30	100

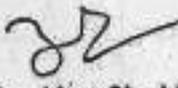
All values are in mg/L except pH


(Rahul Negi)

Junior Lab Assistant


(Swati Kalra)

Junior Research Fellow


(Dr. Ajeet Singh)
Assistant Scientific
Officer


(S. P. Singh)
Regional Officer



E.T.P. LOG BOOK

Date	01/03/24	02/03/24	03/03/24	04/03/24	05/03/24	06/03/24	07/03/24
Energy Meter Reading	462113	462230	462346	462463	462575	462693	462802
Flow Meter Reading	363297	364344	365402	366374	367405	368477	369517
Temp. of Equalization Tank	28°C	26°C	25°C	27°C	26°C	26°C	27°C
pH of Equalization Tank	8.0	7.5	7.8	8.0	7.6	7.5	8.1
MLSS in Process	25%	25%	25%	25%	25%	25%	25%
pH of Secondary clarifire	7.5	7.6	7.6	7.5	7.5	7.5	7.3
Temp. of Treated Water	17°C	15°C	16°C	17°C	18°C	18°C	16°C
3.O.D. of Treated Water	16.2	15.8	15.2	16.8	17.2	17.5	15.0
5.O.D. of Treated Water	70.1	69.4	68.2	65.4	70.2	69.1	67.1
T.S.S. of Treated Water	13.0	12.0	12.0	11.0	12.0	12.0	13.0
Quantity of Raw Effluent	1059	1047	1058	0972	1031	1072	1040
Quantity of Treated Water	1040	1030	1040	0960	1020	1060	1030
UREA	5 kg						
DAP	3 kg						
ROBIAL CULTURE	3 kg						
UME	150 kg	150 kg	100 kg	150 kg	150 kg	150 kg	100 kg



Signature of Chemist
Pineesh

Authorised Signature

marks :-

R.B. NARAIN SINGH SUGAR MILLS LTD., LAKSAR (HARIDWAR)

E.T.P. LOG BOOK

Date	08/03/24	9/3/24	10/3/24	11/3/24	12/3/24	13/3/24	14/3/24
Energy Meter Reading	462937	463063	463199	463334	463471	463592	463719
Flow Meter Reading	370505	371662	372706	373744	374831	375863	376931
Temp. of Equalization Tank	26°C	28°C	25°C	26°C	29°C	27°C	26°C
pH of Equalization Tank	8.0	7.5	8.2	7.8	8.5	8.0	7.5
MLSS in Process	25%	25%	25%	25%	25%	25%	25%
pH of Secondary clarifire	7.5	7.6	7.5	7.5	7.6	7.5	7.7
Temp. of Treated Water	16°C	17°C	18°C	18°C	18°C	19°C	19°C
B.O.D. of Treated Water	16.2	15.8	15.1	16.5	15.4	16.4	14.6
C.O.D. of Treated Water	70.1	68.2	69.2	75.4	78.2	75.2	78.4
T.S.S. of Treated Water	12.0	13.0	12.0	11.0	12.0	12.0	11.0
Quantity of Raw Effluent	1048	1097	1044	1038	1087	1052	1048
Quantity of Treated Water	1030	1080	1030	1020	1070	1040	1030
UREA	5 kg	5 kg	5 kg	5 kg	5 kg	5 kg	5 kg
DAP	3 kg	3 kg	3 kg	3 kg	3 kg	3 kg	3 kg
MICROBIAL CULTURE	3 kg	3 kg	3 kg	3 kg	3 kg	3 kg	3 kg
LIME	150 kg	100 kg	150 kg	150 kg	150 kg	150 kg	150 kg

Authorised Signature

Signature of Chemist

Remarks :-

Rbns Sugar Mills Ltd						
15UK592_ETP_Rbns Sugar Mills Haridwar						
Rbns Sugar Mills Ltd, RBNS Sugar Mills, Laksar Haridwar						
TIMESTAMP	PH (pH)	BOD (mg/l)	COD (mg/l)	TSS (mg/l)	FLOW (m3/hr)	
03-31-2024 00:00:00	7.84	16.59	87.3	16.97	29.79	
02-29-2024 00:00:00	7.72	18.41	68.77	14.5	34.5	
01-31-2024 00:00:00-	8.17	12.25	50.73	8.08	55.22	
12-31-2023 00:00:00	7.58	16.99	65.15	22.26	58	
11-30-2023 00:00:00	7.97	20.41	82.65	18.47	14.98	
Average	7.86	16.93	70.92	16.06	38.5	

E.T.P. LOG BOOK

Date	15/3/24	16/3/24	17/3/24	18/3/24	19/3/24	20/3/24	21/3/24
Energy Meter Reading	463854	463979	464103	464235	464359	464478	464575
Flow Meter Reading	377999	379058	380114	381148	382083	382968	383864
Temp. of Equalization Tank	27°C	25°C	26°C	25°C	24°C	25°C	24°C
pH of Equalization Tank	8.0	8.6	8.0	7.8	8.0	7.5	8.0
MLSS in Process	25%	25%	25%	25%	25%	25%	25%
pH of Secondary clarifire	7.5	7.6	7.5	7.6	7.5	7.6	7.5
Temp. of Treated Water	19°C	19°C	18°C	19°C	20°C	20°C	20°C
B.O.D. of Treated Water	14.8	15.0	14.2	15.8	17.4	18.2	16.6
C.O.D. of Treated Water	78.2	75.2	74.6	75.1	78.3	80.1	76.5
T.S.S. of Treated Water	11.0	12.0	11.0	13.0	12.0	13.0	12.0
Quantity of Raw Effluent	1068	1059	1056	1034	0935	0885	0896
Quantity of Treated Water	1050	1040	1040	1020	0920	0880	0880
UREA	5 kg						
DAF	3 kg						
MICRO BIAL CULTURE	3 kg						
LIME	150 kg	100 kg	150 kg	200 kg	150 kg	150 kg	150 kg



Authorised Signature

Signature of Chemist

Remarks :-

E.T.P. LOG BOOK

Date	22/3/24	23/3/24	24/3/24	25/3/24	26/3/24	27/3/24	28/3/24
Energy Meter Reading	464710	464810	464908	465004	465115	465210	465302
Flow Meter Reading	384602	385302	386068	386800	387522	388072	388690
Temp. of Equalization Tank	25°C	26°C	24°C	23°C	23°C	24°C	25°C
pH of Equalization Tank	8.5	7.5	8.0	7.6	8.0	7.5	8.0
MLSS in Process	25%	25%	25%	25%	25%	25%	25%
pH of Secondary clarifire	7.6	7.4	7.5	7.5	7.6	7.5	7.5
Temp. of Treated Water	21°C	22°C	23°C	23°C	22°C	24°C	24°C
B.O.D. of Treated Water	16.2	15.8	17.1	15.6	15.8	14.8	16.1
C.O.D. of Treated Water	76.1	75.8	74.2	78.8	80.1	78.1	76.4
T.S.S. of Treated Water	13.0	12.0	11.0	12.0	13.0	11.0	11.0
Quantity of Raw Effluent	732	720	746	732	722	550	618
Quantity of Treated Water	720	710	730	720	710	540	610
UREA	5 kg						
DAP	3 kg						
MICRO BIAL CULTURE	3 kg	3 kg	5 kg	3 kg	3 kg	3 kg	3 kg
LIME	100 kg	150 kg	150 kg	150 kg	100 kg	150 kg	150 kg



Authorised Signature

Signature of Chemist

Remarks :-

E.T.P. LOG BOOK

Date	29/3/24	30/03/24	31/3/24	01/4/24	02/4/24	03/4/24	4/4/24
Energy Meter Reading	465416	465506	465597	465697	465798	465893	465997
Flow Meter Reading	389318	389936	390546	391191	391706	392308	392938
Temp. of Equalization Tank	25°C	26°C	25°C	24°C	25°C	26°C	25°C
pH of Equalization Tank	8.0	7.8	8.0	7.5	7.7	8.0	7.5
MLSS in Process	25%	25%	25%	25%	25%	25%	25%
pH of Secondary clarifire	7.5	7.6	7.5	7.5	7.6	7.5	7.5
Temp. of Treated Water	24°C	25°C	25°C	23°C	24°C	25°C	25°C
B.O.D. of Treated Water	15.6	14.6	14.2	13.6	13.1	14.1	14.5
C.O.D. of Treated Water	74.5	81.2	78.1	76.5	75.2	78.5	79.5
T.S.S. of Treated Water	12.0	13.0	12.0	11.0	12.0	13.0	13.0
Quantity of Raw Effluent	628	618	610	645	515	602	630
Quantity of Treated Water	615	600	600	630	510	590	620
UREA	5 kg	5 kg	5 kg	5 kg	5 kg	5 kg	5 kg
DAP	3 kg	3 kg	3 kg	3 kg	3 kg	3 kg	3 kg
MICRO BIAL CULTURE	3 kg	3 kg	3 kg	3 kg	3 kg	3 kg	3 kg
LIME	100 kg	100 kg	150 kg	100 kg	150 kg	100 kg	150 kg



Authorised Signature

Signature of Chemist

879

Remarks :-

E.T.P. LOG BOOK

1. Date	5/4/24	6/4/24	7/4/24	08/04/24	09/4/24
2. Energy Meter Reading	466099	466196	466294	466386	466512
3. Flow Meter Reading	393614	394249	394878	395477	396172
4. Temp. of Equalization Tank	26°C	25°C	26°C	25°C	26°C
5. pH of Equalization Tank	8.0	7.5	7.8	8.0	7.5
6. MLSS in Process	25%	25%	25%	25%	25%
7. pH of Secondary clarifire	7.5	7.6	7.5	7.6	7.7
8. Temp. of Treated Water	25°C	24°C	25°C	25°C	25°C
9. B.O.D. of Treated Water	14.6	15.0	14.5	14.2	14.0
10. C.O.D. of Treated Water	78.2	75.2	78.8	74.8	79.4
11. T.S.S. of Treated Water	13.0	12.0	12.0	13.0	13.0
12. Quantity of Raw Effluent	676	635	629	599	695
13. Quantity of Treated Water	660	620	610	580	680
UREA	5kg	5kg	5kg	5kg	5kg
DAP	3kg	3kg	3kg	3kg	3kg
MICROBIAL CULTURE	3kg	3kg	3kg	3kg	3kg
LIME	100kg	150kg	150kg	100kg	150kg



Signature of Chemist
Dinesh

Authorised Signature

Remarks :-

CPCB - Station Data

Report: CPCB - Water | Average: In Month | Range: 01/01/2023 - 01/03/2023 | Station: OSUK315_MEL_inlet_Massf... -

Rbns Sugar Mills Ltd (Sugar)

15UK593_ETP_Rbns Sugar Mills_Hardwar
Rbns Sugar Mills Ltd, Rbns Sugar Mills, Hardwar

Note: Please download to see all records [Download](#)

TIMESTAMP	PH (pH)	BOD (mg/l)	COD (mg/l)	TSS (mg/l)	FLOW (m3/hr)
2024-03-31	7.94	16.59	87.30	16.97	29.79
2024-02-29	7.72	18.41	68.77	14.50	34.50
2024-01-31	8.17	12.25	50.73	8.88	55.22
2023-12-31	7.58	16.99	65.15	22.26	58.00
2023-11-30	7.97	20.41	82.65	18.47	14.88

Appendix - III

NALA

NALA

E.T.P. TREATED WATER TANK

40M X 25M X 3.5M (DEPTH)

VOLUME - 3500M³



R. B. N. S. SUGAR MILLS LTD. LHAKSAR
DISTT. HARIDWAR (U.K.) PIN- 247663

PLAN LAYOUT DRAWING FOR
E.T.P. TREATED WATER TANK

DRN. BY	G.D. PARI	SCALE	DATE	DRG. NO.
CHKD. BY	SR. DGM/JR	N.T.S.		
APP. BY	G.M/JL			
MATL.	QTY			



Grams : SUGAR LAKSAR
 Phones: 01332-254653
 Fax: 01332-254655, 254460
 E-mail: edprbns@yahoo.com
 CIN: U74899DL1932PLC000298
 TIN : 05002166908

Rai Bahadur Narain Singh Sugar Mills Limited

Laksar - 247663 (Distt. Haridwar) Uttarakhand

TO WHOM IT MAY CONCERN

This is certify that on average crushing 8000 T.C.D. the E.T.P. Treated water total is 1600 K.L.D. Maximum out of which 690 K.L.D. is being recycled during crushing season for process and to make up water in spray pond . Remaining treated water is used for gardening and irrigation in R.B.N.S. and farmers agriculture land.

S.P. SINGH

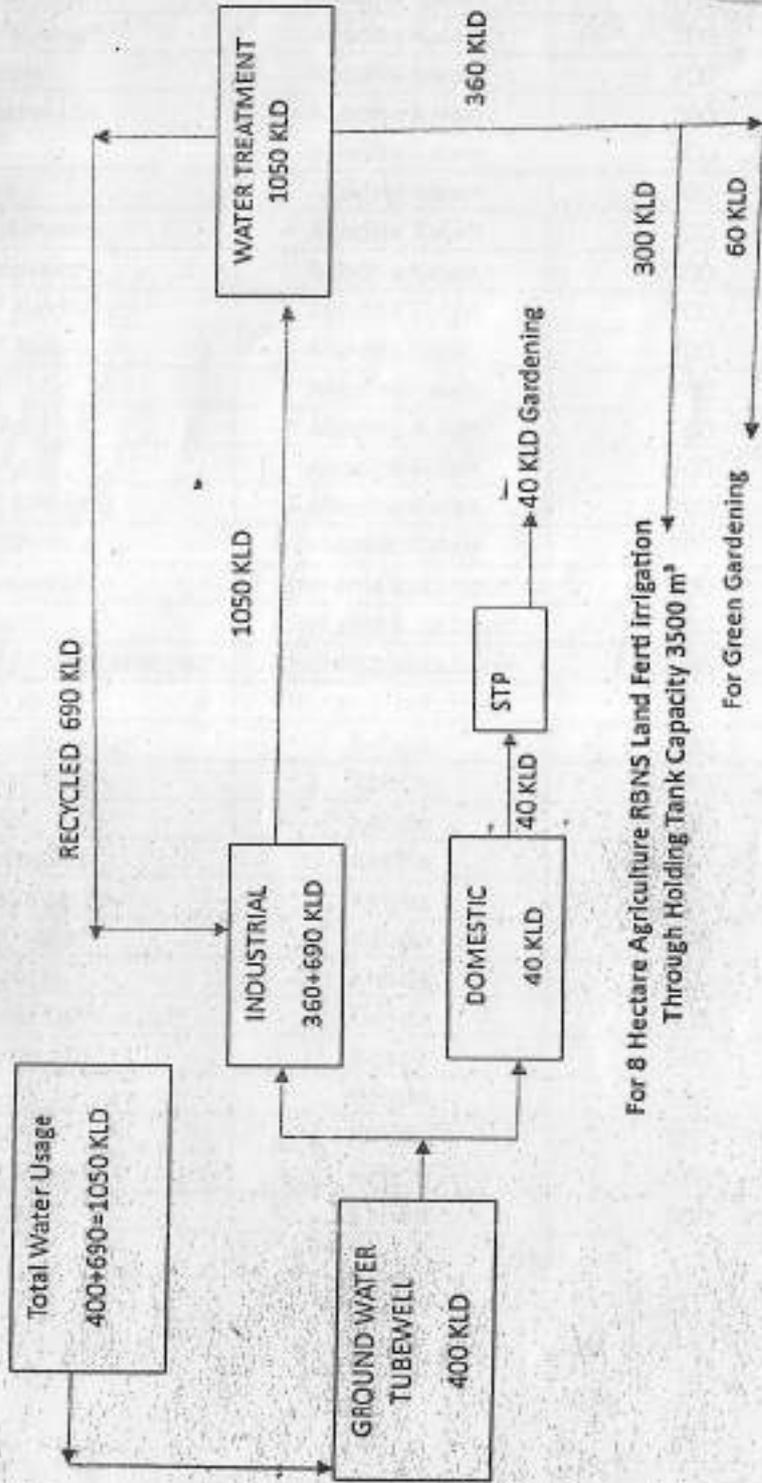
GENERAL MANAGER



R.B.N.S SUGAR MILLS LTD., LAKSAR(DISTT- HARIDWAR)



WATER BALANCE FLOW CHART (FERTI IRRIGATION PLAN)

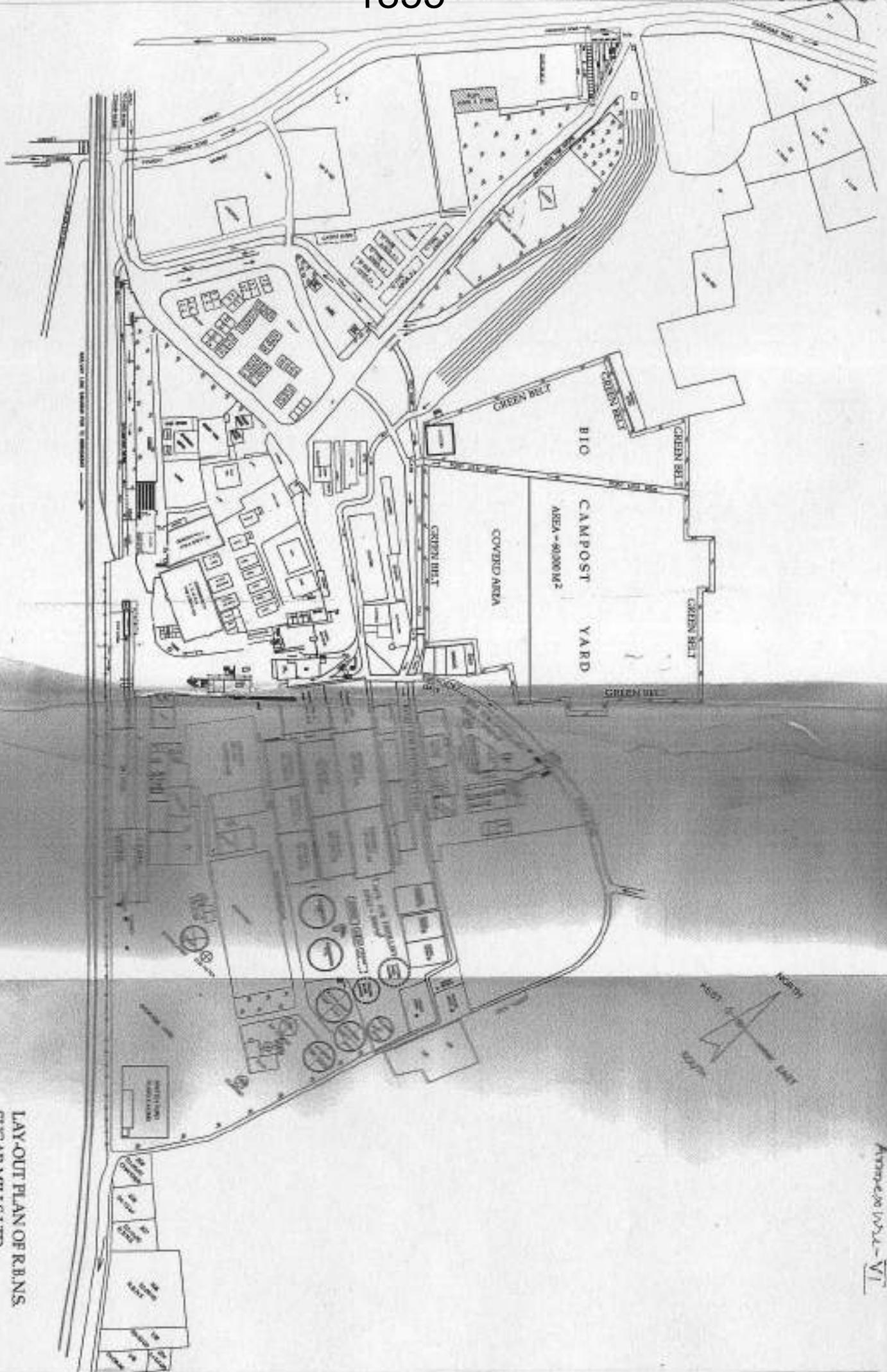


For 8 Hectare Agriculture RBNS Land Ferti Irrigation
Through Holding Tank Capacity 3500 m³

For Green Gardening

S. No.	Farmer Name with Father	Village	Distance mill to Village (Km.)	Area (In Hect.)
1.	Mohan singh / D.S Rodani	Akodha Kalan	.700	2.66
2.	Karam singh / Mangat	Akodha Kalan	.700	3.30
3.	Bijender / Rafal singh	Akodha Kalan	.700	2.19
4.	Virender / Rafal singh	Akodha Kalan	.700	2.19
5.	Harpal / Ramesh	Akodha Kalan	.700	2.78
6.	Iam singh / Ramesh	Akodha Kalan	.700	2.78
7.	Isam / Sandal	Akodha Kalan	.700	2.35
8.	Bhopal / Sariya	Akodha Kalan	.700	2.11
9.	Krisanpal / Sukhveer	Akodha Kalan	.700	2.80
10.	Mahipal / Sukhveer	Akodha Kalan	.700	2.60
11.	Shyam singh / Sukhveer	Akodha Kalan	.700	2.60
12.	Sumitra devi / Tejpal	Akodha Kalan	.700	3.13
13.	Vinod / Tejpal	Akodha Kalan	.700	2.42
14.	Pardeep / Bhopal	Akodha Kalan	.700	1.23
15.	Sandeep / Bhopal	Akodha Kalan	.700	1.23
16.	Shyam singh / Dheeraj	Akodha Kalan	.700	1.97
17.	Ram kumar / Dheeraj	Akodha Kalan	.700	1.44
18.	Mansaf / Ahamad ali	Kharanja kutubpur	1.00	5.80
19.	Satpal / Asharam	Kharanja kutubpur	1.00	5.53
20.	Tufel Ahamad / Faizul ahamad	Kharanja kutubpur	1.00	4.75
21.	Altaf / Rahmat ali	Kharanja kutubpur	1.00	4.15
22.	Karan pal / Chatter singh	Kehda	.500	3.92
23.	Vedpal / Chatter singh	Kehda	.500	3.92
24.	Rajveer / Harpal	Kehda	.500	3.47
25.	Dhrampal / Baktaver	Kehda	.500	3.49
26.	Jabar singh / Jiya singh	Kehda	.500	3.07
27.	Pritham singh/ Kalu	Kehda	.500	3.32
28.	Bijender / meghraj	Kehda	.500	3.00
29.	Parvesh umakra/Kanwarpal	Kehda	.500	3.10
30.	Vedpal/Baktawar	Kehda	.500	2.65
31.	Rahul / Sushil	Kehda	.500	6.86
32.	Sumitra/Sukhveer	Kehda	.500	2.15
33.	Manish / Isam singh	Kehda	.500	3.78
34.	Parmod/Sukhveer	Kehda	.500	2.20
			Total	104.91





LAY-OUT PLAN OF R.N.S.
SUGAR MILLS LTD.
LAKSAR (HARIDWAR)

Amme/Wall-VI

S. FILIN A



Factory Name : R.B.N.S. SUAR MILLS LTD., LAKSAR, HARIDWAR

Irrigation plan and Schedule

S.No.	Date of Irrigation	Crop		
		Plant Cane	Ratoon Cane	Wheat
1.	30 th November	✓	-	
2.	15 th December	✓	-	✓
3.	30 th December	✓	-	✓
4.	15 th January	✓	✓	✓
5.	30 th January	✓	✓	✓
6.	15 th February	✓	✓	✓
7.	30 th February	✓	✓	✓
8.	15 th March	✓	✓	-
9.	30 th March	✓	✓	-
10.	15 th April	✓	✓	-
11.	30 th April	✓	✓	-
	Total			



राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं गुफे क शर्मा पुत्र श्री मंगल शर्मा गाँव धरना बुढ़वापुल
का निवासी हूँ। मेरी १.७५ हैक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से
निकलने वाले पानी को चीनी मिल संग्रहित कर खेत सिंचाई हेतु आपूर्ति करे जिससे कि मेरी फसल
को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
लिए तैयार हूँ।



हस्ताक्षर कृष्क गुफे क
नाम कृष्क गुफे क
पिता का नाम शर्मा
गाँव धरना बुढ़वापुल
तहसील मन्स
जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं अलताफ पुत्र श्री रमेश शर्मा गाँव खरना कुतुबपुर
का निवासी हूँ। मेरी 1.15 हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
हरिद्वार के बजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से
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को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
लिए तैयार हूँ।



हस्ताक्षर कृषक अलताफ
नाम कृषक अलताफ
पिता का नाम रमेश शर्मा
गाँव खरना कुतुबपुर
तहसील लक्सर
जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं.....सतपाक..... पुत्र श्री.....बाबा राक..... गाँव.....प्यरजा कुचुबुके
का निवासी हूँ। मेरी ...५.३ हैक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से
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को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
लिए तैयार हूँ।



हस्ताक्षर कृषकसतपाक.....
नाम कृषकसतपाक.....
पिता का नामबाबा राक.....
गाँवप्यरजा कुचुबुके.....
तहसीललक्सर.....
जिलाहरिद्वार.....

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं मनसफ पुत्र श्री अमर सिंह श्री गाँव खरना कुलुषपुर का निवासी हूँ। मेरी 5.90 हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से निकलने वाले पानी को चीनी मिल संबंधित कर खेत सिंचाई हेतु आपूर्ति करे जिससे कि मेरी फसल को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के लिए तैयार हूँ।



हस्ताक्षर कृष्क मनसफ
 नाम कृष्क मनसफ
 पिता का नाम अमर सिंह श्री
 गाँव खरना कुलुषपुर
 तहसील लक्सर
 जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं.....राज कुमार..... पुत्र श्री.....प्यारवा..... गाँव.....डाकोडा कान
का निवासी हूँ। मेरी1.44..... हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से
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को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
लिए तैयार हूँ।



हस्ताक्षर कृषकराज कुमार.....

नाम कृषकराज कुमार.....

पिता का नामप्यारवा.....

गाँवडाकोडा कान.....

तहसीललक्सर.....

जिलाहरिद्वार.....

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं श्याम सिंह पुत्र श्री चारुजी गाँव डा. कोटा जमा का निवासी हूँ। मेरी 1-9-77 हैक्टयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से निकलने वाले पानी को चीनी मिल संशोधित कर खेत सिंचाई हेतु आपूर्ति करे जिससे कि मेरी फसल को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के लिए तैयार हूँ।



हस्ताक्षर कृषक श्याम सिंह

नाम कृषक श्याम सिंह

पिता का नाम चारुजी

गाँव डा. कोटा जमा

तहसील लक्सर

जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं संदीप पुत्र श्री कोपाल गाँव डा. कोरा कला
 का निवासी हूँ। मेरी 1.23 हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
 हरिद्वार के नजदीक है। मेरी जमीन में जन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से
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 को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
 लिए तैयार हूँ।



हस्ताक्षर कृषक संदीप
 नाम कृषक संदीप
 पिता का नाम कोपाल
 गाँव डा. कोरा कला
 तहसील लक्सर
 जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं मनीष पुत्र श्री इसम सिंह गाँव केदरा
का निवासी हूँ। मेरी 3.18 हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से निकलने वाले पानी को चीनी मिल संशोधित कर खेत सिंचाई हेतु आपूर्ति करे जिससे कि मेरी फसल को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के लिए तैयार हूँ।



हस्ताक्षर कृषक मनीष
नाम कृषक मनीष
पिता का नाम इसम सिंह
गाँव केदरा
तहसील लक्सर
जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं मोहन सिंह पुत्र श्री डी. रम. रोडनी गाँव डाकोडा कला
का निवासी हूँ। मेरी ...ल. 6.6... हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से
निकलने वाले पानी को चीनी मिल संशोधित कर खेत सिंचाई हेतु आपूर्ति करे जिससे कि मेरी फसल
को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
लिए तैयार हूँ।



हस्ताक्षर कृषक

नाम कृषक मोहन सिंह

पिता का नाम डी. रम. रोडनी

गाँव डाकोडा कला

तहसील लक्सर

जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं राहुल पुत्र श्री सुशील गाँव बेहरी
का निवासी हूँ। मेरी 6.8.6 हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से निकलने वाले पानी को चीनी मिल संशोधित कर खेत सिंचाई हेतु आपूर्ति करे जिससे कि मेरी फसल को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के लिए तैयार हूँ।



हस्ताक्षर कृषक Rahul
नाम कृषक राहुल
पिता का नाम सुशील
गाँव बेहरी
तहसील लक्सर
जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लखसर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं सि-गेफ पुत्र श्री तेजोपाल गाँव बुजोडा कान
 का निवासी हूँ। मेरी ...2.42 हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लखसर,
 हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से
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 को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
 लिए तैयार हूँ।



हस्ताक्षर कृषक सि-गेफ
 नाम कृषक सि-गेफ
 पिता का नाम तेजोपाल
 गाँव बुजोडा कान
 तहसील लखसर
 जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं..... सुमिना देवी पुत्र श्री..... तेजपाल गाँव..... काकोरा बजरा
का निवासी हूँ। मेरी 3.4.3. हैक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से
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को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
लिए तैयार हूँ।



हस्ताक्षर कृषक सुमिना देवी
नाम कृषक सुमिना देवी
पिता का नाम तेजपाल
गाँव काकोरा बजरा
तहसील लक्सर
जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं ब्रजगोपाल सिंह पुत्र श्री सुखवीर सिंह गाँव डाकपोरा बंगला का निवासी हूँ। मेरी 2.60 हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से निकलने वाले पानी को चीनी मिल संशोधित कर खेत सिंचाई हेतु आपूर्ति करे जिससे कि मेरी फसल को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के लिए तैयार हूँ।



हस्ताक्षर कृषक सुखवीर सिंह
 नाम कृषक ब्रजगोपाल सिंह
 पिता का नाम सुखवीर सिंह
 गाँव डाकपोरा बंगला
 तहसील लक्सर
 जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं प्रवेश कुमारी पुत्र श्री राजेंद्र पाल गाँव केहडा
का निवासी हूँ। मेरी ३.१० हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से
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को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
लिए तैयार हूँ।



हस्ताक्षर कृषक प्रवेश
नाम कृषक प्रवेश कुमारी
पिता का नाम राजेंद्र पाल
गाँव केहडा
तहसील लक्सर
जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं बेद पाक पुत्र श्री बन्तावर गाँव के हड्ड
का निवासी हूँ। मेरी २.६५ हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से
निकलने वाले पानी को चीनी मिल संशोधित कर खेत सिंचाई हेतु आपूर्ति करे जिससे कि मेरी फसल
को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
लिए तैयार हूँ।



हस्ताक्षर कृषक बेद पाक
वाम कृषक बेद पाक
पिता का नाम बन्तावर
गाँव के हड्ड
तहसील लक्सर
जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं सुमिना पुत्र श्री सुधनोद गाँव केसरा
का निवासी हूँ। मेरी २:१५ हैक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से
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लिए तैयार हूँ।



हस्ताक्षर कृषक सुमिना

नाम कृषक सुमिना

पिता का नाम सुधनोद

गाँव केसरा

तहसील लक्सर

जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं प्रमोद पुत्र श्री सुधवीर गाँव के.ए.ए. का निवासी हूँ। मेरी २.३० हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से निकलने वाले पानी को चीनी मिल संशोधित कर खेत सिंचाई हेतु आपूर्ति करे जिससे कि मेरी फसल को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के लिए तैयार हूँ।



हस्ताक्षर कृषक प्रमोद
नाम कृषक प्रमोद
पिता का नाम सुधवीर
गाँव के.ए.ए.
तहसील लक्सर
जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं..... गर्दीपाल पुत्र श्री..... सुखवीर..... गाँव..... ठाकुरेवा.....
का निवासी हूँ। मेरी2.40..... हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से
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को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
लिए तैयार हूँ।



हस्ताक्षर कृषक गर्दीपाल.....
नाम कृषक गर्दीपाल.....
पिता का नाम सुखवीर.....
गाँव ठाकुरेवा.....
तहसील लक्सर.....
जिला हरिद्वार.....

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं.....सुधन पाठ..... पुत्र श्री.....सुधन जी..... गाँव.....अकोड़ा कला
का निवासी हूँ। मेरी२-७०..... हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से
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को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
लिए तैयार हूँ।



हस्ताक्षर कृषकसुधन पाठ.....
नाम कृषकसुधन पाठ.....
पिता का नामसुधन जी.....
गाँवअकोड़ा कला.....
तहसीललक्सर.....
जिलाहरिद्वार.....

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं मोपाल पुत्र श्री राजिमा गाँव लक्ष्मीकोट कला
 का निवासी हूँ। मेरी 2.11 हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
 हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं जेहूँ की फसल होती है। यदि चीनी मिल से
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 को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
 लिए तैयार हूँ।



हस्ताक्षर कृषक मोपाल
 नाम कृषक मोपाल
 पिता का नाम राजिमा
 गाँव लक्ष्मीकोट कला
 तहसील लक्ष्मी
 जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं.....शोपाल पुत्र श्री.....राजिमा..... गाँव.....बुकोई काँठ
का निवासी हूँ। मेरी 2.11 हैक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
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को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
लिए तैयार हूँ।



हस्ताक्षर कृषकशोपाल
नाम कृषकशोपाल
पिता का नामराजिमा
गाँवबुकोई काँठ
तहसीललक्सर
जिलाहरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं पुत्र श्री गाँव
 का निवासी हूँ। मेरी हैक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
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 को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
 लिए तैयार हूँ।



हस्ताक्षर कृषक
 नाम कृषक
 पिता का नाम
 गाँव
 तहसील
 जिला

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं पुत्र श्री गाँव
 का निवासी हूँ। मेरी हैक्टर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
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 को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
 लिए तैयार हूँ।



हस्ताक्षर कृषक
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 पिता का नाम
 गाँव
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राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं.....हरपाक..... पुत्र श्री.....रमेश..... गाँव.....रुडा को ५/ कपा
 का निवासी हूँ। मेरी२.७०..... हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
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 को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
 लिए तैयार हूँ।



हस्ताक्षर कृषकहरपाक.....

नाम कृषकहरपाक.....

पिता का नामरमेश.....

गाँवरुडा को ५/ कपा.....

तहसीललक्सर.....

जिलाहरिद्वार.....

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं बिरेन्द्र पुत्र श्री रामक रिह गाँव हजकोड़ा कला
का निवासी हूँ। मेरी ३.१९ हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
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लिए तैयार हूँ।



हस्ताक्षर कृषक बिरेन्द्र
नाम कृषक बिरेन्द्र
पिता का नाम रामक रिह
गाँव हजकोड़ा कला
तहसील लासूर
जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं विजोन्द्र पुत्र श्री राजल सिंह गाँव डाकोटा कला
 का निवासी हूँ। मेरी 2.12 हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
 हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से
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 को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
 लिए तैयार हूँ।



हस्ताक्षर कृषक विजोन्द्र
 नाम कृषक विजोन्द्र
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 गाँव डाकोटा कला
 तहसील लक्सर
 जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं कमल सिंह पुत्र श्री मंगल गाँव अकोटा कला
का निवासी हूँ। मेरी 3.3.3.5 हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से
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लिए तैयार हूँ।



हस्ताक्षर कृषक कमल सिंह
नाम कृषक कमल सिंह
पिता का नाम मंगल
गाँव अकोटा कला
तहसील लक्सर
जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं बिजेन्द्र पुत्र श्री भैराराज गाँव के.ए.ए.
का निवासी हूँ। मेरी 3.00 हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से निकलने वाले पानी को चीनी मिल संशोधित कर खेत सिंचाई हेतु आपूर्ति करे जिससे कि मेरी फसल को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के लिए तैयार हूँ।



हस्ताक्षर कृषक बिजेन्द्र
नाम कृषक बिजेन्द्र
पिता का नाम भैराराज
गाँव के.ए.ए.
तहसील लक्सर
जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं प्रियम पुत्र श्री माल गाँव केडा
का निवासी हूँ। मेरी 3.32 हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से निकलने वाले पानी को चीनी मिल संशोधित कर खेत सिंचाई हेतु आपूर्ति करते जिससे कि मेरी फसल को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करके के लिए तैयार हूँ।



हस्ताक्षर कृषक प्रियम
नाम कृषक प्रियम
पिता का नाम माल
गाँव केडा
तहसील लक्सर
जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं जगदर सिंह पुत्र श्री जि.भा. सिंह गांव कौटडा
का निवासी हूँ। मेरी ३.०.७ हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
हरिद्वार के बजटीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से
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को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
लिए तैयार हूँ।



हस्ताक्षर कृषक जगदर सिंह
नाम कृषक जगदर सिंह
पिता का नाम जि.भा. सिंह
गांव कौटडा
तहसील लक्सर
जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं राजवीर पुत्र श्री हरपाल गाँव केहडा का निवासी हूँ। मेरी 3.47 हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से निकलने वाले पानी को चीनी मिल संशोधित कर खेत सिंचाई हेतु आपूर्ति करे जिससे कि मेरी फसल को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के लिए तैयार हूँ।



हस्ताक्षर कृषक राजवीर
 नाम कृषक राजवीर
 पिता का नाम हरपाल
 गाँव केहडा
 तहसील लक्सर
 जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं धर्मपाल पुत्र श्री बलदावर गाँव कैहल

का निवासी हूँ। मेरी 3.49 हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से निकलने वाले पानी को चीनी मिल संशोधित कर खेत सिंचाई हेतु आपूर्ति करे जिससे कि मेरी फसल को कोई बुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के लिए तैयार हूँ।



हस्ताक्षर कृषक धर्मपाल
 नाम कृषक धर्मपाल
 पिता का नाम बलदावर
 गाँव कैहल
 तहसील लक्सर
 जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं वेदपाल पुत्र श्री दत्तर सिंह गाँव केहडा
का निवासी हूँ। मेरी 3.92 हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से
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को कोई नुकसान न हो तो मैं चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
लिए तैयार हूँ।



हस्ताक्षर कृषक वेदपाल
नाम कृषक वेदपाल
पिता का नाम दत्तर सिंह
गाँव केहडा
तहसील लक्सर
जिला हरिद्वार

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मेकर्णमात..... पुत्र श्रीदत्तरासिंह..... गांवकोहडा.....
का निवासी हूँ। मेरी3.92..... हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से
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को कोई नुकसान न हो तो मे चीनी मिल से निकलने वाले पानी से अपने खेतों की सिंचाई करने के
लिए तैयार हूँ।



हस्ताक्षर कृषककर्णमात.....
नाम कृषककर्णमात.....
पिता का नामदत्तरासिंह.....
गांवकोहडा.....
तहसीललक्सर.....
जिलाहरिद्वार.....

राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर, हरिद्वार

द्विपक्षीय सहमति पत्र

मैं.....सुरेश..... पुत्र श्री.....शोभा..... गाँव.....कामोड़ा कला
 का निवासी हूँ। मेरी ...1.2.3... हेक्टेयर जमीन राय बहादुर नारायण सिंह शुगर मिल्स लि०, लक्सर,
 हरिद्वार के नजदीक है। मेरी जमीन में गन्ना एवं गेहूँ की फसल होती है। यदि चीनी मिल से
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 लिए तैयार हूँ।



हस्ताक्षर कृषकसुरेश.....
 नाम कृषकसुरेश.....
 पिता का नामशोभा.....
 गाँवकामोड़ा कला.....
 तहसीललक्सर.....
 जिलाहरिद्वार.....



Gram : SUGAR LAKSAR
 Phone: 01332-254653
 Fax: 01332-254655,254460
 E-mail: edprbns@yahoo.com
 CIN:U74899DL1932PLC000298
 TIN :05002166908

Rai Bahadur Narain Singh Sugar Mills Limited

Laksar – 247663 (Distt. Haridwar) Uttarakhand

Boiler Ash Generation & Disposal Record

Months	Bagasse Generation (MT)	Bagasse Consumption in boilers (MT)	Ash Generation (MT)	Ash disposal at Low Land RBNS Area (MT)
Feb – 2025	75384	53126.3	919.37	919.37
01.03.2025 – 25.03.2025	68551	46265.7	804.93	804.93



Rai Bahadur Narain Singh Sugar Mills Ltd., Laksar (Haridwar)
Boiler Ash Generation & Disposal Record Log Book

Date	Bagasse Generation (MT)	Bagasse Consumption in boilers (MT)	Ash Generation (MT)	Ash disposal at Low Land RBNS Area (MT)
01/02/25	2786	1908.9	30.54	30.54
02/02/25	1934	1583.9	26.93	26.93
03/02/25	2870	1956.1	35.21	35.21
04/02/25	2799	1975.9	35.57	35.57
05/02/25	2756	1851.4	31.47	31.47
06/02/25	2785	1911.7	30.58	30.58
07/02/25	2808	1940.0	34.92	34.92
08/02/25	2779	1883.4	35.78	35.78
09/02/25	2710	2058.4	34.99	34.99
10/02/25	2521	2057.4	37.03	37.03
11/02/25	2756	1896.6	30.34	30.34
12/02/25	2758	1916.9	34.50	34.50
13/02/25	2702	1930.6	32.82	32.82
14/2/25	2205	1706.6	27.30	27.30
15/2/25	2815	1916.5	34.49	34.49
16/2/25	2816	1950.0	37.05	37.05
17/2/25	2817	1903.8	32.36	32.36
18/2/25	2873	1920.2	34.56	34.56
19/2/25	2814	1893.3	30.29	30.29
20/2/25	2817	1891.9	32.16	36.70
21/2/25	2716	1864.1	29.82	29.82
22/2/25	2817	2050.0	36.90	36.90
23/2/25	2839	2008.4	32.13	32.13
24/2/25	2687	1947.3	35.05	35.05
25/02/25	2768	1950.4	37.05	37.05
26/02/25	2693	1900.4	32.30	32.30
27/02/25	2030	1548.5	24.77	24.77
28/02/25	2713	1803.7	32.46	32.46
Total.	75384	53126.3	919.37	919.37
Signature	 Authorised Signature			

Rai Bahadur Narain Singh Sugar Mills Ltd., Laksar (Haridwar)
Boiler Ash Generation & Disposal Record Log Book

Date	Bagasse Generation (MT)	Bagasse Consumption in boilers (MT)	Ash Generation (MT)	Ash disposal at Low Land RBNS Area (MT)
01/03/25	2883	1892.9	30.28	30.28
02/03/25	2866	1888.2	32.09	32.09
03/03/25	2854	2083.0	35.41	35.41
04/03/25	2831	2000.4	32.00	32.00
05/03/25	2866	1869.3	33.64	33.64
06/03/25	2851	1906.6	30.50	30.50
07/03/25	2828	1816.0	32.68	32.68
08/03/25	2916	1784.4	33.90	33.90
09/03/25	2874	1819.3	29.10	29.10
10/03/25	1604	1462.2	29.24	29.24
11/03/25	2827	1838.6	34.93	34.93
12/3/25	2902	1827.3	32.89	32.89
13/3/25	2876	1793.0	30.48	30.48
14/3/25	2533	1690.0	32.11	32.11
15/3/25	2186	1465.0	29.30	29.30
16/3/25	2810	1666.5	29.99	29.99
17/3/25	2880	1853.7	33.36	33.36
18/3/25	2822	1886.7	30.18	30.18
19/3/25	2903	1863.7	31.68	31.68
20/03/25	2862	1910.5	34.38	34.38
21/03/25	2526	1806.7	30.71	30.71
22/03/25	2895	1969.2	31.50	31.50
23/03/25	2835	1947.1	36.99	36.99
24/03/25	2655	2106.7	33.70	33.70
25/03/25	2666	2118.7	33.89	33.89
Total	68551	46265.7	804.93	804.93.
 Signature			 Authorised Signature	