BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,

PRINCIPAL BENCH, NEW DELHI

O.A. NO. 369 OF 2022

IN THE MATTER OF:

Sachin Tomar ...Applicant

Versus

State of U. P. & Ors. ...Respondents

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Drawn & filed by:

Vivek Singh

(Vivek Singh)
Lex Alliance
Advocate for Respondent No. 4
A – 414, LGF, Defence Colony,
New Delhi – 110024
e-mail: lexalliance.vivek@gmail.com
Mob: 9810182555

Place: New Delhi
Date: 03.10.2023

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

O.A. NO. 369 OF 2022

IN THE MATTER OF:

Sachin Tomar ...Applicant

Versus

State of U. P. & Ors. ...Respondents

SHORT AFFIDAVIT ON BEHALF OF RESPONDENT NO. 4 I.E., M/S INDIAN POTASH LTD. (PROJECT PROPONENT UNIT)

I, Lokesh Kumar, aged about 51 years, Unit of the Titawi Sugar Unit of M/s Indian Potash Ltd. having my office at Titawi Sugar Unit Complex, Muzaffarnagar, Uttar Pradesh – 251301, do hereby solemnly affirm and depose as under:

1. That I am the authorized representative of M/s Indian Potash Ltd. ("**answering Respondent**") having been duly authorized vide Power of Attorney dated 26.09.2023 and am well conversant with the facts of the present case based on the records maintained by the answering Respondent. A true copy of the Power of Attorney dated 26.09.2023 is annexed herewith as **Annexure R-1**.

2. At the outset, the answering Respondent denies and disputes each and every allegation which has been levelled against the answering Respondent save for those allegations which have been specifically and expressly admitted hereinafter. Thus, there may not be deemed to be

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any admission on the part of the answering Respondent for want of specific denial and/ or traverse.

3. That at the further outset, it is stated that the answering Respondent Company is filing the present short Affidavit for want of the Complaint, Report(s) and other documents which may have been filed by the Petitioner/ Applicant or the State of U.P. before this Hon'ble Tribunal. The answering Respondent reserves its right to file a detailed response alongwith further documents as and when the documents and complaints are received by it.

4. That the answering Respondent company is completely compliant with the directions passed by this Hon'ble Tribunal and operates strictly within the stipulated parameters of law. The answering Respondent Company does not cause any environmental pollution and all discharge which emanates from its premises.

5. The answering Respondent got analyzed the ETP discharge outlet report from NABL Third Party Lab on 28.12.2022 and all the parameters were found under the environment norms. A true copy of the Report is annexed herewith as **Annexure R-2**.

6. That it is further stipulated that the recommendations which had been made in the Show Cause Notice dated 23.01.2023 had all been strengthened and implemented by the answering Respondent Company which was also duly communicated to the Committee and the Board vide the answering Respondent's communication dated 01.02.2023. True copies of the communications dated 23.01.2023 and 01.02.2023

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are annexed herewith as **Annexure R-3** and **Annexure R-4** respectively.

7. That the Officer (Circle -3) of the UPPCB addressed a communication to the Zonal Officer, UPPCB while annexing the copies of the show cause notice, as well as the response of the answering Respondent, seeking appropriate directions for further action, if any. It would be pertinent to mention herein that the Zonal Officer did not respond to the directions issued by Officer (Circle-3), UPPCB Lucknow and did not issue any directions upto the end of the crushing season in May, 2023. A true copy of the communication dated 13.02.2023 is annexed herewith **Annexure R-5**.

8. That in furtherance of the foregoing, it is submitted that the UPPCB vide its communication dated 10.04.2023 stated that all samples which were collected by the inspection team on 25.02.2023 were found to be as per norms. The same clearly goes to show that there has been no instance of any pollution being caused by the answering Respondent Company. A true copy of the communication dated 10.04.2023 is annexed herewith as **Annexure R-6**.

9. That the answering Respondent vide its letter dated 06.07.2023 issued a response to UPPCB pointing out that there is no non-compliance on the part of the answering Respondent and called upon the Board to consider all the equipment which had been put in place by the answering Respondent at the Plant. It would also be pertinent to point out that the drain in front of the Plant of the answering Respondent is not connected to the Hindon River at all since the same was disconnected due to ongoing construction work being undertaken by

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the NHAI since last year. A true copy of the letter dated 06.07.2023 is annexed herewith as **Annexure R-7**.

10. As per NPC Audit Report dated 06.07.2023, this year, the unit has lowered down the ground water abstraction quantity nearly to half as compared to last year. A true copy of the NPC Audit Report dated 06.07.2023 is annexed herewith as **Annexure R-8**.

11. That the answering Respondent had at all times conducted itself as a responsible company by taking necessary steps to strengthen the environment norms. The answering Respondent has voluntarily participated in various programs to maintain the environment within its factory as well as outside the factory.

12. The answering Respondent, vide its letter dated 22.09.2023, had communicated to UPPCB that it has done major investment of around Rs.3.47 Crore in last two years for strengthening environment norms. A true copy of the letter dated 22.09.2023 is annexed herewith as **Annexure R-9**.

13. The answering Respondent wrote letter to UPPCB, giving details of expenses incurred by it in nearby area of factory to maintain environment like desilting of khusropur drain and cleaning of ponds in the nearby villages and also details of average parameter recorded in online monitoring system through OCEMS from 16.12.2022 to 02.02.2023 installed at ETP outlet of the factory and the same were also as per norms. A true copy of the letter dated 23.09.2023 with its enclosures is annexed as **Annexure R-10**.

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14. That in furtherance of the foregoing, it is submitted that the samples which have been collected from the premises of the answering Respondent may be misleading inasmuch as all the samples which were collected from inside the factory premises were found to be as per norms including the sample of final treated discharge at ETP after that the treatment process comes to an end. It was only the samples of drain which were collected after a certain distance i.e., 140 – 150 meters from the factory premises which were indicating higher BOD, but the last sample of the same drain was under norms. Even from the samples which were taken from the ETP discharge drain, there might have been some sampling error inasmuch as 02 out of the 03 samples collected were found to be as per prescribed norms. The same was pointed out to the U. P. Pollution Control Board vide communication dated 26.09.2023, a copy of which is annexed herewith as **Annexure R-11**.

15. That without prejudice to the foregoing and in furtherance thereof, it is submitted that the answering Respondent had participated in the Vrahad Vraksha Ropan Maha Abhiyan – 2023 which was a campaign led by the State and Central Government for clean and healthy environment. The answering Respondent while participating in the said campaign planted 5000 trees of various varieties such as Sagoon, Arjun, Amrood, Jamun, Shesham, Kanji & Sahjan. The answering Respondent is fully aware of its responsibility towards the protection and preservation of the environment and the answering Respondent as a responsible Company fully seeks to advance the said cause. The answering Respondent has addressed a letter dated 25.09.2023 to UPPCB pointing out the same. A true copy of the communication dated 25.09.2023 is annexed herewith as **Annexure R-12**.

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16. That in furtherance of the foregoing, the answering Respondent has also got the Soil and Water Testing conducted by reputed agency i.e., Indian Council of Agricultural Research - Central Soil Salinity Research Institute, Karnal, Haryana. The Effluent Treatment Plant, Adequacy and Validation Report from Vasantdada Sugar Institute, Pune is also pending. The answering Respondent craves leave of this Hon'ble Tribunal to place the Reports of these Tests as and when are submitted by the said Agency.

DEPONENT

Nitin PH/1500/2020
I identify the deponent who has signed in my presence.

VERIFICATION:

031023

Verified at New Delhi on this ____ Day of October, 2023 that the contents of the above Affidavit are true and correct to my knowledge which has been derived from the records maintained by the answering Respondent Company. No part of the above Affidavit is false and nothing material has been concealed therefrom.

DEPONENT

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SRIKANT SUNDER BHANJA
Area-Delhi
Regd. No. 17818
Period-28/12/19
t 22/12/24
GOVT. OF INDIA

CERTIFIED THAT THE DEPONENT
Shri/Smt./Km. Lokesh Kumar Ay-51
S/o, W/o, D/o Sh.....
Identified by Shri/Smt. Nitin Yadav - APV
has solemnly affirmed before me at Delhi
on 031023 Sl. No.....
that the contents of the affidavit which have been read & explained to me are true and correct to his knowledge

NOTARY PUBLIC GOVT OF IND.

031023

ANNEXURE-R1.

सत्यमेव जयते

INDIA NON JUDICIAL

Government of National Capital Territory of Delhi

₹100

e-Stamp

Certificate No.	:	IN-DL72111734856429V
Certificate Issued Date	:	26-Sep-2023 11:16 AM
Account Reference	:	IMPACC (IV)/ dl927103/ DELHI/ DL-DLH
Unique Doc. Reference	:	SUBIN-DLDL92710310378864645239V
Purchased by	:	INDIAN POTASH LIMITED
Description of Document	:	Article 48(c) Power of attorney - GPA
Property Description	:	Not Applicable
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	INDIAN POTASH LIMITED
Second Party	:	Not Applicable
Stamp Duty Paid By	:	INDIAN POTASH LIMITED
Stamp Duty Amount(Rs.)	:	100 (One Hundred only)

NOTARY Baljit Singh Delhi R-10615 Exp. on 3.6.2024 NOTARIAL GOVT. OF INDIA

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Please write or type below this line

IN-DL72111734856429V

POWER OF ATTORNEY

TO ALL TO WHOM THESE PRESENTS SHALL COME, we, Indian Potash Limited, hereinafter referred to as "THE COMPANY", an existing company having its Registered Office at Seethakathi Business Centre, 1st Floor, No. 684-690, Anna Salai, Chennai 600 006, and represented by its Managing Director, Dr. P.S. Gahlaut;

NOTARY Baljit Singh Delhi R-10615 Exp. on 3.6.2024 GOVT. OF INDIA

I identity the deponent who has Signed/Put T.I. in my presence.

Statutory Alert:
1. The authenticity of this Stamp certificate should be verified at www.shcilestamp.com or using e-Stamp Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

8

WHEREAS the Company has authorized Dr. P.S. Gahlaut, Managing Director to execute a Power of Attorney in favour of the executive Shri Lokesh Kumar of the Company Titawi Sugar Complex, Muzaffaranagar vide Article 107 (viii) of the Articles of Association of the Company and the said authorization continues in force;

WHEREAS in as per Article 107 (viii) of the Articles of Association of the Company Dr. P.S. Gahlaut, Managing Director is authorised from time to time to execute a Power of Attorney in favour of the executive Shri Lokesh Kumar of the Company to act in connection with any such proceedings, Demands or other Acts of any of the matters referred to in the said Article 107 (viii) of the Articles of Association of the Company and to revoke such authorisation at pleasure.

WHEREAS it is necessary for the business of the Company that Dr. P.S. Gahlaut authorised to execute a Power of Attorney in favour of the executive Shri Lokesh Kumar of the Company to exercise the powers hereinafter mentioned.

NOW KNOW ALL MEN BY THESE PRESENTS that we, Indian Potash Limited, represented by the said Dr. P.S. Gahlaut, do hereby nominate, constitute and authorise Shri Lokesh Kumar, Unit Head, Titawi Sugar Complex, Titawi, District Muzaffarnagar, Uttar Pradesh S/o. Shri Sukhchain Singh, aged 51 years, an Executive of the Company, to do the following acts, deeds and things viz.,

1. To institute, prosecute, defend, oppose, appear in any litigation in Court of Competent Jurisdiction including civil Courts, High Courts, Supreme Court of India and all kinds of Tribunals, Commissions, Forums, National Green Tribunal; to file Appeal, Writ, Revision, Review, Special Leave Petition, to compromise any matter, refer any dispute to Arbitration, to conduct any matter relating to trade mark, trade names, trade property and passing off action and revenue proceedings relating to Customs or Excise Duties, Tax on Sales, Tax on Service in whatever name the same in known, Income Tax generally or otherwise; to accept service of notices of processes; to engage Advocate(s) and generally do all such deeds and things as may be required for effectually and completely prosecuting or defending any matter.

2. For all or any of the aforesaid purposes of these presents, to sign, seal and swear and affirm, declare, execute and deliver, make, enter into, acknowledge and perfect any deeds of assurances, contracts, agreements, pleadings, affidavits, declarations, petitions, replies, counters, returns, instruments, documents, acts and things, whatsoever as effectually as the Company do by law.

NOTARY
Baljit Singh
Delhi R-10815
Exp. on 3.6.2024
GOVT. OF INDIA

I identity the deponent who has Signed/Put T.I. in my presence.

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3. And we hereby ratify and confirm all and whatsoever, our said Attorney shall do by virtue of this Power of Attorney.

IN WITNESS WHEREOF, Indian Potash Limited represented by the said Dr. P.S. Gahlaut, Managing Director and the said Dr. P.S. Gahlaut representing Indian Potash Limited and by virtue of the said Article 107 (viii) of the Articles of Association of the Company, has hereunto sets his hand this 26th September, 2023.

Signed by Dr. P.S. Gahlaut for and on behalf of Indian Potash Limited pursuant to Article 107(viii) of the Articles of Association of the Company in the presence of:

For INDIAN POTASH LIMITED

P.S. GAHLAUT
Managing Director

WITNESSES:

1. Yadu Nandan Nauriyal
Sr. Mgr- Admn.-IP2

2. A-22, Mandakini Apts
Pitampura, Delhi-110034

2. VISHAL SHONAK
U-53A Upadhya Block,
Near Baba Palace, Shakarpur,
East Delhi-110092

I identity the deponent who has Signed/Put T.I. in my presence.

Book No. 6A1 Page No. 22 Sl. No. 1691/23

NOTARY
Baljit Singh
Delhi R-10615
Exp. on 3.6.2024
GOVT. OF INDIA

ATTESTED
BALJIT SINGH
NOTARY DELHI, R-10615
Government of India
129, Rajendra Bhawan,
Rajendra Place, New Delhi-8

26 SEP 2023

ENVIRONMENT MANAGEMENT CENTRE

ENVIRONMENTAL TESTING & APPRAISAL LABORATORIES

(HOUSE OF POLLUTION MONITORING, ANALYSIS & CONSULTANCY SERVICES)

NABL ACCREDITED

NABL ACCREDITED, GOVT. APPROVED & ISO CERTIFIED LAB

ANNEXURE-R2.

INDUSTRIAL EFFLUENT TEST REPORT

SAMPLING DETAILS

Test Report No: ET&A/WS/63918/22 **Work Order No. & Date:** 63918/22 & 22.12.2022	**Laboratory Sample Code :** EMC/WS/63982/22		**Date:** 28.12.2022
Name and Address of Customer	**M/s Indian Potash Limited** **Unit-Titawi Sugar Complex** **Distt- Muzaffarnagar (U.P.)**		**Order Reference :** Through e-mail
Sample Description/Type	***ETP Outlet Sample***	**Sample Collected & Provided by**	Laboratory Representative
Sampling Location	Industrial premises	**Sample Quantity / Packing**	2 Ltr. x1 No. PVC Can (Sealed Sample) 300 ml Sample for BOD Bottle
Date of Sampling	22.12.2022	**Date of Receipt of Sample**	22.12.2022
Sampling Procedure:	As per IS: 3025 (Part 1) 1987 Reaff. 2003		
Date of Start of Analysis	23.12.2022	**Date of Completion of Analysis**	28.12.2022

TEST RESULT

PHYSICAL PARAMETERS

S. No.	Test(s) Conducted	Unit	Test Results	Standards (Effluents discharging in stream)	Test Method (IS 3025)
1.	Colour	-	Colourless	Colourless	IS:3025(Part 4)1983 Reaff.2012
2.	Odour	-	Odourless	Odourless	IS:3025(Part 5)1983 Reaff.2012
3.	Turbidity	NTU	15.6	25	S:3025(Part 10)1984Reaff. 2012
4.	Total Suspended Solids	mg/L	19.280	50	IS:3025(Part 17)1984Reaff.2012
5.	Total Dissolved Solids	mg/L	790.364	-	IS:3025(Part16)1984 Reaff.2012
6.	Total Solids	mg/L	809.644	-	IS:3025(Part15)1984Reaff. 2014

CHEMICAL PARAMETERS

1.	pH	-	7.38	5.5-9.5	IS:3025(Part11)1983 Reaff.2012
2.	BOD	mg/L	22.50	30	IS:3025(Part44)1993Reaff. 2014
3.	COD	mg/L	106.50	250	IS:3025(Part58)2006Reaff. 2014
4.	Oil & Grease	mg/L	5.8	10	IS:3025(Part39)1991Reaff. 2014

Checked by

E.M.C E.T.&A.LAB ROORKEE

Authorized Signatory

Director
Environment Management Centre
Khasra No. 1102 Indl. Area
Salempur Rajputan, Roorkee

Remarks:

- The above results are related only to tests performed on the sample. Endorsement of product is neither inferred nor implied.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.
- Sample will be destroyed after 15 days of reporting unless otherwise specified.
- Report refers to the sample submitted to us and not drawn by ET&A Lab., unless mentioned otherwise.
- Result in parentheses is from subcontractor.

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www.emctestinglaboratories.com

Khasra No. 1102
Industrial Area Salempur Rajputan,
Roorkee - 247 667 (Uttarakhand)

ANNEXURE-R3 (4)

Annex-03

उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड
UTTAR PRADESH POLLUTION CONTROL BOARD

संदर्भ संख्याः H-87657/सी-3/जल-256/2023. दिनांकः 23/1/2023

सेवा में,

मैसर्स इंडियन पोटाश लि0 (यूनिट–तितावी शुगर कॉम्पलेक्स),
तितावी,
मुजफ्फरनगर।

Asstt manager, EHS
Unit Head
30-01-2023

पंजीकृत

यह कि मै0 इंडियन पोटाश लि0 (यूनिट–तितावी शुगर कॉम्पलेक्स), तितावी, मुजफ्फरनगर जो कि गन्ने की पिराई कर चीनी के उत्पादन हेतु उपरोक्त वर्णित स्थल पर कार्यरत है तथा जल (प्रदूषण निवारण तथा नियंत्रण) अधिनियम 1974 यथासंशोधित की धारा–47 के अन्तर्गत एक कम्पनी है।

यह कि मा0 राष्ट्रीय हरित अधिकरण में योजित ओ0ए0 नं0 369/2022 सचिन तोमर बनाम स्टेट आफ उत्तर प्रदेश में पारित आदेश दिनांक 24.05.2022 के अनुपालन में गठित संयुक्त समिति द्वारा मै0 इंडियन पोटाश लि0 (यूनिट–तितावी शुगर कॉम्पलेक्स), तितावी, मुजफ्फरनगर का निरीक्षण दिनांक 20.12.2022 को किया गया। निरीक्षण के समय उद्योग संचालित एव Non Compliance पाया गया। निरीक्षण के समय कूलिंग वाटर ओवरफ्लो/स्प्रे पान्ड ओवरफ्लो को बाईपास करतें हुए Storm water drain मे निस्तारित किया जाता पाया गया। Storm water drain में निस्तारित उत्प्रवाह के एकत्रित नमूने में BOD की मात्रा 50 मि0ग्रा0/ली0 पायी गयी, जोकि निर्धारित मानकों से अधिक है। गठित संयुक्त समिति के माध्यम से प्राप्त आख्या में निम्नवत् Recommendations की गयी है:–

1- The unit shall dismantle the bypass line observed at the inlet of STP.
2- The unit shall stop bypassing the cooling tower overflow/spray pond over flow into the storm water drain and shall treat all the industrial effluent and cooling tower overflow/spray pond through ETP only.
3- The unit shall operate its oil skimmer properly.
4- The unit shall dismantle all the fresh water lines available at ETP area and shall use only treated waste water for backwashing /cleaning purpose.
5- Color- coding of pipelines shall be ensured.
6- Unit shall install electromagnetic flowmeters at ETP inlet & STP outlet.
7- Unit shall maintain logbook for chemical consumption of ETP.

उपरोक्त से स्पष्ट है कि गठित संयुक्त समिति द्वारा निरीक्षण के समय उद्योग में पर्यावरणीय मानकों का उल्लंघन पाया गया।

उद्योग को राज्य बोर्ड के के पत्र संख्या 71810/ UPPCB/ Muzaffarnagar (UPPCBRO) /CTO /water /Muzaffarnagar/2019 dated 28-01-2020 दिनांक 31.12.2024 तक सशर्त सहमति जल प्राप्त है। उद्योग द्वारा सहमति शर्तों की अनुपालन आख्या प्रेषित नहीं की गयी है।

अतएव जनहित एवं जन साधारण को स्वच्छ वातावरण प्रदान करने के लिए यह आवश्यक है कि उद्योग का संचालन रोका जाये।

अतः जल (प्रदूषण निवारण तथा नियंत्रण) अधिनियम, 1974 की धारा 33 ए सपठित धारा 27 (2) के अन्तर्गत राज्य बोर्ड को प्रदत्त शक्तियो के अधीन उद्योग मै0 इंडियन पोटाश लि0 (यूनिट–तितावी शुगर कॉम्पलेक्स), तितावी, मुजफ्फरनगर के गठित संयुक्त समिति द्वारा दिनॉक 20.12.2022 को किये गये निरीक्षण में दी गई संस्तुति/ऑब्जर्वेशन के आधार पर उद्योग के विरूद्ध सक्षम अधिकारी के अनुमोदनोपरान्त निम्नलिखित कारण बताओ नोटिस जारी किया जाता है:–

1. यह कि क्यों न मै0 इंडियन पोटाश लि0 (यूनिट–तितावी शुगर कॉम्पलेक्स), तितावी, मुजफ्फरनगर को बोर्ड के पत्र संख्या 71810/UPPCB/Muzaffarnagar(UPPCBRO)/CTO/water/Muzaffarnagar/2019 dated 28-01-2020 द्वारा निर्गत सहमति जल को निलम्बित (Suspend) कर दिया जाए।
2. यह कि क्यों न मै0 इंडियन पोटाश लि0 (यूनिट–तितावी शुगर कॉम्पलेक्स), तितावी, मुजफ्फरनगर के उत्पादन/संचालन कार्य को तत्काल प्रभाव से बन्द कर दिया जाए।
3. यह कि क्यों न सक्षम अधिकारियों से यह अपेक्षा की जाए कि मै0 इंडियन पोटाश लि0 (यूनिट–तितावी शुगर कॉम्पलेक्स), तितावी, मुजफ्फरनगर को प्रदत्त विद्युत तथा अन्य सुविधाओं को तत्काल प्रभाव से बन्द कर दें।

CANE SUGAR COMPLEX
TITAWI

Dir. (Ops.)	UNIT HEAD/C.C.	Store
ACCOUNTS		ENGG.
PURCHASE	30 JAN 23	
CANE		
	RECEIVED	

टी.सी. - 12 वी, विभूति खण्ड, गोमती नगर,
लखनऊ - 226 010
दूरभाष : 0522-2720828, 2720831
ई–मेल : info@uppcb.com
वेबसाइट : www.uppcb.com

T.C.-12 V, Vibhuti Khand, Gomti Nagar,
Lucknow - 226 010
Phone : 0522-2720828, 2720831
E-mail : Info@uppcb.com
Website : www.uppcb.com

12 (5)

(2)

उपरोक्त के अतिरिक्त यह भी स्पष्ट करें कि क्यों न मा0 एन0जी0टी0 द्वारा पारित आदेश के अनुक्रम में सी0पी0सी0बी0 द्वारा विकसित की गयी मैथाडोलॉजी के अनुसार उद्योग मै0 इंडियन पोटाश लि0 (यूनिट–तितावी शुगर कॉम्पलेक्स), तितावी, मुजफ्फरनगर पर सक्षम अधिकारी के अनुमोदनोपरान्त गठित संयुक्त समिति के निरीक्षण दिनांक 20.12.2022 से पर्यावरणीय मानकों का उल्लंघन मानते हुए रू0–30,000/– प्रतिदिन की दर से सुधारात्मक कार्यवाही किये जाने तक उल्लंघनकारी दिवसों की अवधि हेतु पर्यावरणीय क्षतिपूर्ति अधिरोपित कर उक्त की वसूली की जाए।

अतः उपरोक्त के कम में आपको निर्देशित किया जाता है कि कारण बताओ नोटिस के संबंध में पूर्ण विवरण के साथ अपना पक्ष 15 दिन के अन्दर बोर्ड को प्रेषित करें। आप द्वारा इस कारण बताओ नोटिस का उत्तर न प्रेषित करने अथवा संतोषजनक उत्तर प्राप्त न होने पर उद्योग के विरूद्ध जल (प्रदूषण निवारण तथा नियंत्रण) अधिनियम, 1974 यथासंशोधित की धारा 33–ए के अन्तर्गत जारी इस कारण बताओ नोटिस की पुष्टि कर दी जायेगी तथा उल्लंघनकारी दिवसों हेतु पर्यावरणीय क्षतिपूर्ति अधिरोपित कर दी जायेगी।

सक्षम अधिकारी द्वारा अनुमोदनोपरान्त पत्र निर्गमन हेतु अधिकृत।

अभिषेक त्रिपाठी
23/1/23

(अभिषेक त्रिपाठी
प्रभारी (वृत्त–3)

प्रतिलिपि–निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित :–

1. जिलाधिकारी, मुजफ्फरनगर ।
2. पुलिस अधीक्षक, मुजफ्फरनगर
3. अधिशासी अभियन्ता, विद्युत वितरण खण्ड, उ0प्र0 पावर कार्पोरेशन लि0, मुजफ्फरनगर ।
4. अधिशासी अभियन्ता, जल संस्थान, मुजफ्फरनगर ।
5. क्षेत्रीय अधिकारी, उ0प्र0प्रदूषण नियंत्रण बोर्ड, मुजफ्फरनगर को इस निर्देश के साथ कि उपरोक्त आदेशों के अनुपालन के सम्बन्ध में उद्योग का अद्यतन निरीक्षण कर आख्या 15 दिन में आवश्यक रूप से प्रेषित सुनिश्चित करें।

प्रभारी (वृत्त–3)

13

TRUE TRASLATED COPY OF ANNEXURE -R 3.

UTTAR PRADESH POLLUTION CONTROL BOARD

Reference No.: H-87657/C-3/ Water-256/2023.

Dated: 23/1/2023

To,

M/s Indian Potash Ltd. (Unit Titavi Sugar Complex)

Titavi

Muzzaffarnagar

Registered

It is noted that M/s. Indian Potash Ltd. (Unit-Titawi Sugar Complex), Titawi, Muzaffarnagar, which is operational at the aforementioned location for the production of sugar through sugarcane crushing, is a company registered under Section 47 of the Water (Prevention and Control of Pollution) Act, 1974 as amended.

It is also noted that in compliance with the order dated 24.05.2022 passed in O.A. No. 369/2022 titled Sachin Tomar vs. State of Uttar Pradesh by the Hon. National Green Tribunal, a joint committee was formed. This committee inspected M/s. Indian Potash Ltd. (Unit-Titawi Sugar Complex), Titawi,

Muzaffarnagar on 20.12.2022. During the inspection, the industry was found to be operational and in non-compliance. It was observed during the inspection that the overflow from the cooling water/spray pond was being bypassed and discharged into the stormwater drain. The collected sample from the discharge into the stormwater drain showed a BOD (Biochemical Oxygen Demand) level of 50 mg/l, which is higher than the prescribed standards. The joint committee has made the following recommendations in its report-

1- The unit shall dismantle the bypass line observed at the inlet of STP.

2-The unit shall stop bypassing the cooling tower overflow/spray pond over flow into the storm water drain and shall treat all the industrial effluent and cooling tower overflow/spray pond through ETP only.

3- The unit shall operate its oil skimmer properly.

4- The unit shall dismantle all the fresh water lines available at ETP area and shall use only treated waste water for backwashing /cleaning purpose.

5- Color- coding of pipelines shall be ensured.

6- Unit shall install electromagnetic flowmeters at ETP inlet & STP outlet;

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7- Unit shall maintain logbook for chemical consumption of ETP.

From the perusal of the above it is established that the joint committee found the industry to be in violation of the environmental standards during the course of the inspection.

The industry has been granted conditional consent for water under the State Board's letter number 71810/ UPPCB/ Muzaffarnagar (UPPCBRO) /CTO / water /Muzaffarnagar/2019 dated 28-01-2020, valid until 31.12.2024. The industry has not submitted a report on the compliance with the consent conditions.

Therefore, in order to provide a clean environment to the public and for the public interest, it is essential that the operation of the industry be halted.

Hence, under the powers granted to the State Board by Section 33A read with Section 27(2) of the Water (Prevention and Control of Pollution) Act, 1974, based on the recommendations/observations made during the inspection conducted by the joint committee of the industry M/s. Indian Potash Ltd. (Unit-Titawi Sugar Complex), Titawi, Muzaffarnagar on 20.12.2022, a "Show Cause Notice" is hereby issued against the industry, post the approval of the competent authority

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1. Why shouldn't the consent for water, issued to M/s. Indian Potash Ltd. (Unit-Titawi Sugar Complex), Titawi, Muzaffarnagar, under the Board's letter number 71810/UPPCB / Muzaffarnagar(UPPCBRO) / CTO / water / Muzaffarnagar/2019 dated 28-01-2020, be suspended?
2. Why shouldn't the production/operation activities of M/s. Indian Potash Ltd. (Unit-Titawi Sugar Complex), Titawi, Muzaffarnagar be immediately halted?
3. Why the concerned officers should not be expected that they immediately stop all the -Illegible- and other services of the M/S Indian Potash Limited (Unit- Titavi Sugar Complex) Titavi, Muzzafarnangar.

In addition to the above, clarify why shouldn't the M/s. Indian Potash Ltd. (Unit-Titawi Sugar Complex), Titawi, Muzaffarnagar be imposed an environmental compensation at the rate of INR 30,000/- per day for the duration of non-compliance days until corrective action is taken, based on the methodology developed by CPCB in accordance with the order passed by the Hon. NGT. Therefore, in this context, you are directed to submit your response with complete details regarding the show-cause notice to the Board within 15 days. If a response to this show-cause notice is not submitted by you or if a satisfactory response is not

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received, the show-cause notice issued under Section 33-A of the Water (Prevention and Control of Pollution) Act, 1974 as amended will be confirmed, and environmental compensation will be imposed for the non-compliance days.

Authorized to issue letters after approval by the competent authority.

-sd Illegible-

Abhishek Tripathi

In-charge (Circle-3)

Copy - The following are informed for necessary action and information:-

1. District Magistrate, Muzaffarnagar.
2. Superintendent of Police, Muzaffarnagar.
3. Executive Engineer, Electricity Distribution Division, U.P. Power Corporation Ltd., Muzaffarnagar.
4. Executive Engineer, Water Department, Muzaffarnagar.
5. Regional Officer, U.P. Pollution Control Board, Muzaffarnagar with the directive to ensure that the above orders are complied with by conducting an updated inspection of the industry and submitting a report within 15 days without fail.

In-charge (Circle-3)

18

Unit-TITAWI SUGAR COMPLEX Village & Post Office -

TITAWI Distt.: MUZAFFARNAGAR (UP)

PIN -illeigble

Phone: 0131-2486496 2486497

FAX: 01312486603

CIN: U14219TN1953PLC000961

ANNEXURE-R-4

Annx-04

INDIAN POTASH LIMITED

IPL

Unit - TITAWI SUGAR COMPLEX
Village & Post Office - TITAWI
Distt. : MUZAFFARNAGAR (U.P.)
PIN : 251 301
Phone : 0131-2486496, 2486497
FAX : 0131-2486603
CIN : U14219TN1955PLC000961

Ref : TSC/HRD/2023/ 137

01.02.2023

Incharge Officer (Circle -3),
T.C-12 V, Vibhuti Khand, Gomti Nagar,
Uttar Pradesh Pollution Control Board,
Lucknow - 226010

Sub – Reply of recommendations against Joint Inspection dated 20.12.22.

Dear Sir,

With reference to your letter No.H-87657/C-3/Jal-256/2023 dated 23rd January 2023 regarding non compliance of our unit which had been inspected by the Joint Committee against NGT O.A No.369/2022 on 20.12.22. As per the show cause notice following non compliance were mentioned by the inspecting Committee and we have taken corrective measures as per the recommendations suggested by the third party upgrade our ETP Plant. We have already installed one new aeration tank with the capacity 4737m³ and adopted fine bubble diffuser technology based on air blower (02 Nos. capacity =1250m³/hr) to meet the BOD & COD Standards. Our average BOD is 21ppm as per OCEMS. During the Joint Committee visit, our ETP operation was found very satisfactory as told us by them. However we have enclosed ETP Discharge report for November 22 & December 22.

Sl. No	Committee's Recommendations	Unit Reply
1	The Unit shall dismantle the bypass line observed at the inlet of STP	Our STP was found functional and it is a dead line of colony and it is not a bypass line however as per the recommendations we have dismantled the line observed at the inlet of STP(Photo enclosed)

H.O./Regd. Office : 1st Floor, Seethakathi Business Centre, 684-690, Anna Salai, Chennai - 600 006
Corporate Office : 10-B, Rajendra Park, Pusa Road, New Delhi - 110 060

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DIAN
OTASH
LIMITED

IPL

Unit - TITAWI SUGAR COMPLEX
Village & Post Office - TITAWI
Distt. : MUZAFFARNAGAR (U.P.)
PIN : 251 301
Phone : 0131-2486496, 2486497
FAX : 0131-2486603
CIN : U14219TN1955PLC000961

2	The unit shall stop bypassing the cooling tower overflow/ spray pond overflow into the storm water drain and shall treat all the industrial effluent and cooling tower overflow/ spray pond through ETP only.	We are continuously operating our ETP in an effective manner and treated waste water is being used for irrigation purpose for nearby farmers and green Park in factory premises as well as spray on factory road and our Cane Yard area on daily basis to settle dust. The pump installed at spray pond suddenly got tripped and the condensate water which was fresh got overflowed into the ETP outlet water drain however in order to overcome this problem we have installed one more standby pump at surplus hot water condensate cooling spray pond and we are not discharging any untreated effluent in any storm water drain. All the industrial effluent and cooling tower overflow/ spray pond overflow are treated through ETP.
3	The Unit shall operate its oil skimmer properly	We have installed centralized lubrication system at mills to avoid oil and we have also 01 oil skimmers in ETP to extract oil from the water and additionally we deploy contract labour at the inlet for manual extraction of oil from the water. However Joint Inspecting Committee had suggested to tight the scrapper for more extraction of oil, as per suggestion we have made tight the scrapper and we used to operate our oil skimmers properly.

H.O./Regd. Office : 1st Floor, Seethakathi Business Centre, 684-690, Anna Salai, Chennai - 600 006
Corporate Office : 10-B, Rajendra Park, Pusa Road, New Delhi - 110 060

DIAN
OTASH
LIMITED

IPL

Unit - TITAWI SUGAR COMPLEX
Village & Post Office - TITAWI
Distt. : MUZAFFARNAGAR (U.P.)
PIN : 251 301
Phone : 0131-2486496, 2486497
FAX : 0131-2486603
CIN : U14219TN1955PLC000961

4	The unit shall dismantle all the fresh water lines available at ETP area and shall use only treated waste water for backwashing/ cleaning purpose.	The fresh water lines were used for Drinking water of staff woking at ETP and at the start of season we have to develop bio mass culture with the help of cowdung and fresh water mixing with appropriate nutrients. As per the recommendations, we have dismantled all the fresh water lines at ETP area.
5	Color Coding of pipelines shall be ensured	We have already provided color coding in pipelines but as per the recommendations we have made it more effective
6	Unit shall install electromagnetic flowmeter at ETP inlet & amp; STP outlet	The unit has already installed mechanical flow meter at ETP inlet & amp; STP outlet however as per the recommendations we will replace the existing flow meters of ETP & STP with Electromagnetic flow meters.
7	Unit shall maintain log book for chemical consumption of ETP	We have already maintained log book for the ETP operation & chemical consumption of ETP which is filled on daily basis but as per your recommendation we will make separate log book for chemical consumption(Photocopy attached)

We have also attached herewith the Compliance report of CTO.

We assure you that we will be always careful & vigilant for better water treatment without any bypass arrangement etc. The committee had not found any water going outside factory premises as we are recycling most of water to replace borewell consumption for cooling of plant equipments.

H.O./Regd. Office : 1st Floor, Seethakathi Business Centre, 684-690, Anna Salai, Chennai - 600 006
Corporate Office : 10-B, Rajendra Park, Pusa Road, New Delhi - 110 060

(9) 22

DIAN OTASH IMITED

IPL

Unit - TITAWI SUGAR COMPLEX
Village & Post Office - TITAWI
Distt. : MUZAFFARNAGAR (U.P.)
PIN : 251 301
Phone : 0131-2486496, 2486497
FAX : 0131-2486603
CIN : U14219TN1955PLC000961

We had implemented all the best practices suggested in validation of Vasant Dada Sugar Institute, Pune and accordingly time to time equipment & technology is being upgraded as per their recommendations. The visiting team has found our ETP operation in a systematic manner.

Sir, our ETP is always operational and the parameters are under prescribed limit. We have also implemented most of the recommendation as suggested by the Joint Inspecting Committee to make our compliance more effective therefore we request you to discharge from the showcase notice dated 23.01.23.

Thanking you,

Yours faithfully,

For Indian Potash Limited Unit - Titawi Sugar Complex

Unit Head

INDIAN POTASH LIMITED

cc The Regional Officer,
U.P Pollution Control Board,
6-B, New Mandi,
Muzaffarnagar, 251301

Encl : As above

02-2-23

क्षेत्रीय अधिकारी
उ० प्र० प्रदूषण नियन्त्रण बोर्ड
मुजफ्फरनगर

23

TRUE TYPED COPY OF - ANNEXURE - R4

INDIAN POTASH LIMITED

Ref: TSC/HRD/2023/137 01.02.2023

Incharge Officer (Circle-3),

T.C-12 V, Vibhuti Khand, Gomti Nagar,

Uttar Pradesh Pollution Control Board,

Lucknow - 226010

Sub - Reply of recommendations against Joint Inspection dated 20.12.22.

Dear Sir,

With reference to your letter No.H-87657/C-3/Jal-256/2023 dated 23rd January 2023 regarding non compliance of our unit which had been inspected by the Joint Committee against NGT O.A No.369/2022 on 20.12.22. As per the show cause notice following non compliance were mentioned by the inspecting Committee and we have taken corrective measures as per the recommendations suggested by the third party upgrade our ETP Plant. We have already installed one new soration tank with the capacity 4737m^3 and adopted fine bubble diffuser technology

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Unit Reply

Sl No.	Committee's **Recommendations**	Unit Reply
1	The Unit shell dismantle the bypass line observed at the inlet of STP	Our STP was found functional and it is a dead line of colony and it is not a bypass line however as per the recommendations we have dismantled the line observed at the inlet of STP(Photo enclosed)
2	The unit shall stop bypassing the	We are continuously operating our ETP in an

25

	cooling tower overflow/ spray pond overflow into the storm water drain and shall treat all the industrial effluent and cooling tower overflow/ spray pond through ETP only.	effective manner and treated waste water is being used for Irrigation purpose for nearby farmers and green Park in factory premises as well as spray on factory road and our Cane Yard area on daily basis to settle dust. The pump installed at spray pond suddenly got tripped and the condensate water which was fresh got overflowed Into the ETP outlet water drain however in order to overcome this problem we have installed one more standby pump at surplus hot water condensate cooling spray pond and we are not

26

		discharging any untreated effluent in any storm water drain. All the industrial effluent and cooling tower overflow/ spray pond overflow are treated through ETP.
3.	The Unit shall operate its oil skimmer properly	We have installed centralized lubrication system at mills to avoid oll and we have also 01 oll skimmers in ETP to extract oil from the water and additionally we deploy contract labour.at the inlet for manual extraction of roll from the water. However Joint Inspecting Committee had suggested to tight the scrapper for more

27

		extraction of oil, as per suggestion we have made tight the scrapper and we used to operate our oil skimmers properly.
4.	The unit shall dismantle all the fresh water lines available at ETP area and shall use only treated waste water for backwashing/ cleaning purpose.	The fresh water lines were used for Drinking water of staff woking at ETP and at the start of season we have to develop blo mass culture with the help of cowdung and fresh water mixing with appropriate nutrients. As per the recommendations, we have dismantled all the fresh water lines at ETP area.
5.	Color Coding of pipelines shall be ensured	We have already provided color coding in pipelines but as per the

28

		recommendations we have made it more effective
6.	Unit shall install electromagnetic flowmeter at ETP Inlet & amp; STP outlet	The unit has already installed mechanical flow meter at ETP inlet & amp; STP outlet however as per the recommendations we will replace the existing flow meters of ETP & STP with Electromagnetic flow meters.
7.	Unit shall maintain log book for chemical consumption of ETP	We have already maintained log book for the ETP operation & chemical consumption of ETP which is filled on daily basis but as per your recommendation we will make separate log book for

29

		chemical consumption (Photocopy attached)

We have also attached herewith the Compliance report of CTO.

We assure you that we will be always careful & vigilant for better water treatment without any bypass arrangement etc. The committee had not found any water going outside factory premises as we are recycling most of water to replace borewell consumption for cooling of plant. equipments.

We had implemented all the best practices suggested in validation of Vasant Dada Sugar Institute, Pune and accordingly time to time equipment & technology is being upgraded as per their recommendations. The visiting team has found our ETP operation in a systematic manner.

Sir, our ETP is always operational and the parameters are under prescribed limit. We have also implemented most of the

30

recommendation as suggested by the Joint Inspecting Committee to make our compliance more effective therefore we request you to discharge from the showcause notice dated 23.01.23.

Thanking you,

Yours faithfully,

For Indian Potash Limited Unit - Titawi Sugar Complex

-sd illegible-

Unit Head

Cc The Regional Officer,

U.P Pollution Control Board,

6-B, New Mandi,

Muzaffarnagar, 251301

Encl: As above

ANNEXURE - R5
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उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड
UTTAR PRADESH POLLUTION CONTROL BOARD

सदर्भ संख्या: HB9040 /सी-3/ वृत्त /2023 दिनांक: 13.2.23

सेवा में,

क्षेत्रीय अधिकारी
उ0प्र0 प्रदूषण नियंत्रण बोर्ड
मुजफ्फरनगर।

विषयः— मै0 इण्डियन पोटाश लि0, (यूनिट–तितावी शुगर कॉम्पलेक्स), तितावी, मुजफ्फरनगर द्वारा राज्य बोर्ड से निर्गत कारण बताओ नोटिस के संबंध प्राप्त प्रत्यावेदन के संबंध में।

महोदय,

कृपया उपरोक्त विषयक मै0 इण्डियन पोटाश लि0, (यूनिट–तितावी शुगर कॉम्पलेक्स), तितावी, मुजफ्फरनगर के प्रत्यावेदन दिनांक 01.02.2023 जोकि वृत्त में दिनांक 08.02.2023 को प्राप्त हुआ है, जिसकी प्रतिलिपि आपको भी पृष्ठांकित है, का सन्दर्भ ग्रहण करने का कष्ट करें। उक्त उद्योग द्वारा राज्य बोर्ड द्वारा जारी कारण बताओ नोटिस दिनांक 23.1.2023 के सम्बन्ध में अपना प्रत्यावेदन प्रेषित किया गया है। ~~जिसकी फोटो कॉपी आपकी जानकारी हेतु~~

अतः उक्त उद्योग से प्राप्त प्रत्यावेदन की प्रति संलग्न कर आपको इस निर्देश के साथ प्रेषित कि उद्योग के प्रत्यावेदन में वर्णित तथ्यों का संज्ञान लेते हुए आवश्यक कार्यवाही करने का कष्ट करें तथा कृत कार्यवाही की आख्या अपनी स्पष्ट संस्तुति सहित अधोहस्ताक्षरी को प्रेषित करना सुनिश्चित करें, जिससे प्रकरण पर अग्रिम कार्यवाही किया जाना सम्भव हो सके।

~~संलग्नक: उपरोक्तानुसार।~~

भवदीय,
11/2/23
प्रभारी, वृत्त–3

टी.सी. - 12 वी, विभूति खण्ड, गोमती नगर,
लखनऊ - 226010
दूरभाष : 0522-2720828, 2720831
ई–मेल : info@uppcb.com
वेबसाइट : www.uppcb.com

T.C.-12 V, Vibhuti Khand, Gomti Nagar,
Lucknow - 226 010
Phone : 0522-2720828, 2720831
E-mail : info@uppcb.com
Website : www.uppcb.com

TRUE TRANSLATED COPY OF ANNEXURE-R5

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Uttar Pradesh Pollution Control Board

189040/C-3/Water/25.4.23 Dted. 13.7.23

To

Regional Officer

Uttar Pradesh Pollution Control Board

Muzaffarnagar.

Subject : In respect of the Show Cause Notice issued by the State Board to M/s. Indian Potash Ltd. (Unit Titawi Sugar Complex) Titawi, Muzaffar Nagar.

Sir,

Please in respect of the application dated 01.02.2023 issued by M/s. Indian Potash Ltd. (Unit Titawi Sugar Complex) Titawi, Muzaffar Nagar, which has been received in circle on 08.02.2023. The copy of which is annexed for your reference. The above said industry has submitted its reply dated 23.3.23 to the State Board. The copy of which is annexed.

Hence while annexing the copy received from the industry, you are directed to take appropriate action and submit your report to the undersigned, so that further action may be taken.

Sd/- Incharge Circle.

ANNEXURE-R6 (20)

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उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड
UTTAR PRADESH POLLUTION CONTROL BOARD

Anne-5

संदर्भ संख्या PCB/725 /सी-3/ जल /256/2023 दिनांक: 18/4/23

Mr. Vinay Kumar, DyGM, Brc
Mr. Dharmendra, AGM(Prod.)
Mr. Kapil Kum Dev, AM, EHS
Unit Head
18.04.2023

सेवा में,

मै० आई.पी.एल. (पूर्व नाम तितावी शुगर कॉम्प्लेक्स),
तितावी,
मुजफ्फरनगर

विषयः- जल (प्रदूषण निवारण एवं नियंत्रण) अधिनियम- 1974 यथासंशोधित के प्राविधानो के अनुपालन के संबंध में।

महोदय,

उपरोक्त विषयक का संदर्भ ग्रहण करने का कष्ट करें। उक्त संबंध में थर्ड पार्टी टेक्निकल इस्टीटयूशन्स का निरीक्षण दिनांक 25.02.2023 के समय उद्योग के उत्प्रवाह का नमूना मानको के अनुरूप पाया गया। प्राप्त आख्या एवं संस्तुति के परिप्रेक्ष्य में उद्योग को जल (प्रदूषण निवारण एवं नियंत्रण) अधिनियम-1974 यथासंशोधित के अन्तर्गत निम्नानुसार निर्देश जारी किये जाते हैः-

1. Flow meters shall be installed at Excess condensate generated, Fresh water added in Sugar UGR, Process cooling tower make-up water, Cogeneration cooling tower make-up water, wet scrubber make-up water, Power turbine cooling water, mills bearing cooling water, B/C massecuite cooling water, Molasses tank cooling water, Sulphur burner cooling water, Effluent generated from mills, Effluent generated from boiling house, Effluent generated from refinery house, Wash water generated from IER, Soda boiling water drain line, Effluent generated from RO and DM plant and Process cooling tower overflow,
2. Process cooling tower overflow shall be treated through ETP and not allowed to sprayed in the factory premises.
3. For treatment of process cooling tower overflow, existing ETP should be up-graded by addition of Anaerobic filter before aeration.
4. Collections pits shall be constructed in centrifugal section.
5. To get correct flow rate, all flow meters shall be calibrated by the unit.
6. ETP gutters shall be made properly leak-proof.
7. To avoid mixing of rain water with effluent, separate storm water channel shall be constructed.
8. House keeping shall be improved by reducing leakages and overflows.
9. All flow meter's logbooks shall be maintained properly.

अतः उपरोक्त के परिप्रेक्ष्य में आपको निर्देशित किया जाता है कि केन्द्रीय प्रदूषण नियंत्रण बोर्ड द्वारा गठित थर्ड पार्टी टेक्निकल इंस्टीटयूशन्स की टीम द्वारा दी गयी उपरोक्त निर्देशो का अक्षरशः अनुपालन सुनिश्चित करें तथा 15 दिन के अन्दर केन्द्रीय प्रदूषण नियंत्रण बोर्ड, दिल्ली एवं उ.प्र. प्रदूषण नियंत्रण बोर्ड, लखनऊ को अनुपालन आख्या प्रेषित किया जाना सुनिश्चित करें।

06/4/23
(घनश्याम)
मुख्य पर्यावरण अधिकारी,(वृत-3)

प्रतिलिपिः- क्षेत्रीय अधिकारी उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड मुजफ्फरनगर को इस निर्देश के साथ प्रेषित कि उपरोक्त निर्देशों का ससमय अनुपालन सुनिश्चित कराते हुए 15 दिन के अन्दर अनुपालन आख्या प्रेषित करें।

मुख्य पर्यावरण अधिकारी,(वृत-3)

टी.सी. - 12 वी, विभूति खण्ड, गोमती नगर,
लखनऊ - 226 010
दूरभाष : 0522.2720828, 2720831

T.C.-12 V, Vibhuti Khand, Gomti Nagar,
Lucknow - 226 010
ई-मेल : info@uppcb.com

TRUE TYPED/TRANSLATED COPY OF. 34
ANNEXURE-R5.

UTTAR PRADESH POLLUTION CONTROL BOARD

Reference No.: H-91725/C-3/ Water-256/2023.

Dated: 10/4/2023

Mr. Unar Kumar, Dy. GM
Mr. Dharmendra, AG MC
Mr. Kapil Dev, AM, EHS
-Sd- Illegible
Unit Head
18.04.2023

To,

M/s IPL (Former Name Titavi Sugar Complex)

Titavi

Muzzaffarnagar

Subject: Regarding the compliance with the provisions of the Water (Prevention and Control of Pollution) Act 1974, as amended.

Sir,

Reference is made to the subject mentioned above. During the inspection of the third-party technical institutions on 25.02.2023, the industry's produce was found to be in accordance with the prescribed standards. In view of the received report and recommendations, the industry is issued the following directions under the Water (Prevention and Control of Pollution) Act 1974, as amended:-

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1. Flow meters shall be installed at Excess condensate generated, Fresh water added in Sugar UGR, Process cooling tower make-up water, Cogeneration cooling tower make-up water, wet scrubber make-up water, Power turbine cooling water, mills bearing cooling water, B/C massecuite cooling water, Molasses tank cooling water, Sulphur burner cooling water, Effluent generated from mills, Effluent generated from boiling house, Effluent generated from refinery house, Wash water generated from IER, Soda boiling water drain line, Effluent generated from RO and DM plant and Process cooling tower overflow
2. Process cooling tower overflow shall be treated through ETP and not allowed to sprayed in the factory premises.
3. For treatment of process cooling tower overflow, existing ETP should be up-graded by addition of Anaerobic filter before aeration
4. Collections pits shall be constructed in centrifugal section.
5. To get correct flow rate, all flow meters shall be calibrated by the unit.
6. ETP gutters shall be made properly leak-proof.
7. To avoid mixing of rain water with effluent, separate storm water channel shall be constructed.

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8. House keeping shall be improved by reducing leakages and overflows.

9. All flow meter's logbooks shall be maintained properly.

In light of the above context, you are directed to ensure strict compliance with the instructions given by the team of third-party technical institutions formed by the Central Pollution Control Board. Ensure that a compliance report is submitted to the Central Pollution Control Board, Delhi, and the Uttar Pradesh Pollution Control Board, Lucknow, within 15 days.

-sd illegible-

(Ghanshyam) Chief Environment Officer, (Circle-3)

Copy: The regional officer Uttar Pradesh Pollution Control Board, Muzaffarnagar is directed to ensure timely compliance with the above instructions and submit a compliance report within 15 days.

Chief Environment Officer, (Circle-3)

T.C.-12 V, Vibhuti Khand, Gomti Nagar, Lucknow-226010

E-Mail-info@uppcb.com

Website: www.uppcb.com

Phone: 0522-2720828, 2720831

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Therefore in compliance of Hon'ble N.G.T order dated 17.03.2023 to assess the environment compensation & to impose environment compensation, you are instructed to submit updated audited balance sheet (with turnover) within 02 weeks. If you do not reply / comply in the prescribed period than on the basis of available records of the industry, environment compensation will be imposed on the basis of capital investment, for which you will be completely responsible.

Letter authorised to issue from competent authority

Chief Environment Officer, Circle -3

Copy to – Issued for information and necessary action to the following :-

1. District Magistrate, Muzaffarnagar.
2. Superintendent of Police, Muzaffarnagar.
3. Executive Engineer, Electric Distribution Section, UP Power Corporation Ltd, Muzaffarnagar.
4. Executive Engineer, Water Institute, Muzaffarnagar.
5. Chief Environment Officer, Waste Management Division(1/2), U.P Pollution Control Board, Lucknow
6. Regional Officer, UP Pollution Control Board, Muzaffarnagar with an instructions to comply the orders passed by Hon'bl NGT dated 17.03.2023he should get the updated Audited balance sheet from the industry with in prescribed period and assess the environment compensation and submit his report with the recommendation

Chief Environment Officer(Circle-3)

100 ANNEXURE-R7. 38

INDIAN POTASH LIMITED

IPL

Unit - TITAWI SUGAR COMPLEX
Village & Post Office - TITAWI
Distt. : MUZAFFARNAGAR (U.P.)
PIN : 251 301
Phone : 0131-2486496, 2486497
FAX : 0131-2486603
CIN : U14219TN1955PLC000961

दिनांक 06–07–2023

सेवा में,

श्रीमान मुख्य पर्यावरण अधिकारी (वृत्त 3),
उ0प्र0प्रदूषण नियन्त्रण कन्ट्रोल बोर्ड,
टी0सी012 वी, विभूति खण्ड, गोमती नगर,
लखनऊ

विषय – आपके कार्यालय पत्रांक एच 26572/सी–3/जल /254/2023 दिनांक 28–6–2023 के सम्बन्ध में ।

महोदय,

आपके कार्यालय पत्रांक एच 26572/सी–3/जल /254/2023 दिनांक 28–6–2023 जो इस प्रतिष्ठान की ईकाई तितावी शुगर काम्पलैक्स तितावी में दिनांक 4–07–2023 को प्राप्त हुआ, के सम्बन्ध में आपको सादर अवगत कराना है कि :–

1 यह कि मा0 राष्ट्रीय हरित अधिकरण में योजित ओ0ए नं0 369/2022 सचिन तोमर बनाम स्टेट आफ उत्तर प्रदेश में पारित आदेश दिनांक 24–5–2022 के अनुपालन में गठित संयुक्त समिति द्वारा इण्डियन पोटाश लि0 की ईकाई तितावी शुगर काम्पलैक्स, तितावी का निरीक्षण दिनांक 20–12–2022 को किया गया जिसके आधार पर उ0प्र0प्रदूषिण नियन्त्रण बोर्ड लखनऊ द्वारा दिनांक 23–1–2023 को कारण बताओं नोटिस जारी किया । बोर्ड की अनुसंशाओं के अनुपालन में प्रबन्धन द्वारा अपनी आख्या अपने पत्र दिनांक 01–02–2023 के माध्यम से बोर्ड मुख्यालय को भेजी गई जिसकी प्रति क्षेत्रीय कार्यालय उ0प्र0प्रदूषिण नियन्त्रण बोर्ड मुजफ्फरनगर को भी प्रेषित की गई जिसकी फोटो प्रति **संलग्नक–1** है।

2 यह कि प्रबन्धन द्वारा दिनांक 28–12–2022 को ETP से जनित उत्प्रवाह का थर्ड पार्टी से एनालेसिस करवाकर रिपोर्ट प्राप्त की गई जिसमें सभी नमूने बोर्ड के मानके के अनुरूप पाये गये ।

3 यह कि उ0प्र0प्रदूषण नियन्त्रण कन्ट्रोल बोर्ड एवं केन्द्रीय प्रदूषण नियन्त्रण बोर्ड के निर्देशानुसार तृतीय पक्ष द्वारा कारखाने का पुनः निरीक्षण दिनांक 25–2–2023 को किया गया ।

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INDIAN POTASH LIMITED

IPL

Unit - TITAWI SUGAR COMPLEX
Village & Post Office - TITAWI
Distt. : MUZAFFARNAGAR (U.P.)
PIN : 251 301
Phone : 0131-2486496, 2486497
FAX : 0131-2486603
CIN : U14219TN1955PLC000961

4 यह कि तृतीय पक्ष द्वारा दिनांक 25–2–2023 किये गये निरीक्षण के उत्प्रवाह के नमूनों की टैस्टिगं उ0प्र0प्रदूषण नियन्त्रण कन्ट्रोल बोर्ड द्वारा कराई गई जिसके जवाब में बोर्ड द्वारा अपने पत्रांक एस 91725 /जल /256 /2023 दिनांक 10–4–2023 के माध्यम से यह रिपोर्ट प्रस्तुत की है कि **"उद्योग के उत्प्रवाह का नमूना मानकों के अनुरूप पाया गया"** , जिसकी फोटो प्रति इस पत्र के साथ **संलग्नक–2** है।

5 यह कि उ0प्र0प्रदूषण नियन्त्रण कन्ट्रोल बोर्ड द्वारा की गई अनुसंशाओं का अनुपालन कारखाना प्रबन्धन द्वारा अपने पत्र दिनांक 24–4–2023 के माध्यम से किया गया जिसकी फोटो प्रति इस पत्र के साथ **संलग्नक–3** है।

6 यह कि केन्द्रीय प्रद्रषण नियन्त्रण बोर्ड की टीम द्वारा दिनांक 30–05–2023 को कारखाने में आकर उत्प्रवाह का सैम्पल लेकर निरीक्षण किया गया ।

7 यह कि सरकार द्वारा नैशनल हाईवे का निर्माण (पानीपत खटीमा मार्ग) पिछले एक वर्ष से किया जा रहा है जिसके कारण निर्माण एजेन्सी द्वारा कच्चें नाले को तोडकर पक्का नाला तैयार किया जा रहा है । निर्माणाधीन नाले के फोटोग्राम **संलग्नक–4** है। जिसके कारण यह नाला पूर्णतः अवरूद्ध हो गया था जिससे नाले का किसी भी प्रकार का सम्पर्क हिण्डन नदी से नही रहा। कारखाने द्वारा अपने सरप्लस पानी का छिडकांव बायलर की राख पर एवं मिल के अन्दर पेड पोधों की सिचांई तथा आवश्यकतानुसार किसानों को सिंचाई हेतु दिया जाता है।

8 यह कि excess water quantity को कम करने के लिए गर्म पानी को नये लगाये गये कुलिंग टावर से ठण्डा करके टयुब्बैल के पानी की जगह प्रयोग किया गया। इसके लिए हमने नैशनल प्रोडक्टिविटी कोउन्सिल से water audit करवाया जिसमें गत वर्ष पिराई सत्र में ground water 50% कम पाया गया जिससे E.T.P. पानी का लोड कम हुआ और नवीनतम तकनीकी के अनुसार ETP की गुणवत्ता में सुधार हेतु लगातार पिछले वर्षो में पूंजी निवेश किया गया है। जो निम्न प्रकार है:–

Year	Particulars	Amt. (Rs in Lac)
2019	Tanks & Blower	15.00
2020	Pond	25.00
2021	Decantor	15.00
2022	Areation Tank	25.00
2022	STP	25.00
2022	Cooling Tower	125.00

INDIAN POTASH LIMITED

IPL

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PIN : 251 301
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FAX : 0131-2486603
CIN : U14219TN1955PLC000961

9 पिछले 3 वर्षो का ग्राउन्ड वाटर एबस्ट्रेक्शन की रिपोर्ट निम्न प्रकार है:–

वर्ष 2020–21	2021–22	2022–23
172925KL	167951KL	85931KL

उपरोक्त आकडों हेतु नैशनल प्रोडक्टिविटी कोउन्सिल की water audit report का पृष्ठ संख्या 22 सलग्न की गई है

10 यह कि उ0प्र0प्रदूषण नियन्त्रण बोर्ड लखनऊ द्वारा जारी कारण बताओं नोटिस दिनांक 23–1–2023 के माध्यम से दिये गये सभी आदेशों /निर्देशों का मिल प्रबन्धन द्वारा तुरन्त पालन किया गया जिसकी अनुपालन आख्या अपने पत्र दिनांक 01–02–2023 के माध्यम से बोर्ड मुख्यालय को भेजी गई थी तथा जिसकी प्रति क्षेत्रीय कार्यालय उ0प्र0प्रदूषण नियन्त्रण बोर्ड मुजफ्फरनगर को भी प्रेषित की गई थी E.T.P. के सम्बन्ध में बोर्ड द्वारा अनुमोदित तकनीकि सुधार मिल प्रबन्धन द्वारा तुरन्त किये गये। दिनांक 28.12.2022 को ETP से जनित उत्प्रवाह का थर्ड पार्टी से एनालेसिस करवाकर रिपोर्ट प्राप्त की गई जिसमें सभी नमूने बोर्ड के मानके के अनुरूप पाये गया तथा दिनांक 25.02.2023 को केन्द्रीय प्रदूषण नियन्त्रण बोर्ड द्वारा अधिकृत तृतीय पक्ष (V.S.I) द्वारा किये गये निरीक्षण में भी उत्प्रवाह के नमूनों की टैस्टिंग मानको के अनुरूप पाई गई। उक्त के आलोक में आपसे अनुरोध है कि 23.01.2023 के नोटिस को निरस्त किया जाये जिससे मा0 राष्ट्रीय हरित अधिकरण के निर्णय दिनांक 17–03–2023 में अधोरोपित न किया जाये ।

11 यह कि उ0प्र0प्रदूषण नियन्त्रण कन्ट्रोल बोर्ड, केन्द्रीय प्रदूषण नियन्त्रण बोर्ड एवं मा0 राष्ट्रीय हरित अधिकरण के निर्देशानुसार की गई अनुसंशाओं का पालन कारखाने द्वारा सदैव किया जाता है और किसी भी प्रकार का प्रदूषित उत्प्रवाह हिण्डन नदी में प्रवाहित नही किया जाता है ।

हम आपको विश्वास दिलाते हैं कि कारखाने की कोई मंशा हिण्डन नदी के जल को प्रदूषित करने की नही है और कारखाने का सम्पर्ण प्रयास पर्यावरण की शुद्धता बनाये रखना है।

उपरोक्त के आलोक में आपसे निवेदन है कि बोर्ड द्वारा जो भी अनुसंशा की गई उसका अनुपालन कारखाने द्वारा तुरन्त प्रभाव से किया गया । अतः प्रस्तावित पर्यावरणीय क्षतिपूर्ति

INDIAN
POTASH
LIMITED

IPL

Unit - TITAWI SUGAR COMPLEX
Village & Post Office - TITAWI
Distt. : MUZAFFARNAGAR (U.P.)
PIN : 251 301
Phone : 0131-2486496, 2486497
FAX : 0131-2486603
CIN : U14219TN1955PLC000961

को कारखाने पर अधिरोपित न किया जाये अन्यथा इससे कारखाने की अपार हानि व हकतल्फी होगी जिसकी क्षति पूर्ति किया जाना असम्भव होगा ।

धन्यवाद,

भवदीय,

यूनिट हैड

संलग्नकः उपरोक्तानुसार

प्रतिलिपिः क्षेत्रीय अधिकारी, उ0प्र0 प्रदूषण नियन्त्रण बोर्ड, मुजफ्फरनगर

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TRUE TYPED / TRANSLATED COPY OF.
ANNEXURE-P-7

Date 06-07-2023

INDIAN POTASH LIMITED

To,

The Chief Environmental Officer (Division 3),

Uttar Pradesh Pollution Control Board,

TC-12 V, Vibhuti Khand, Gomti Nagar,

Lucknow

Subject: Regarding your office letter number H 26572 / C - 3 / Water / 254 / 2023 dated 28-6-2023.

Sir,

Regarding your office letter number H 26572 / C - 3 / Water / 254/2023 dated 28-6-2023, which was received at this institution's unit Titavi Sugar Complex, Titavi on 4-07-2023, it is respectfully informed that:-

1. It is to inform that in the case titled OA No. 369/2022, Sachin Tomar vs. State of Uttar Pradesh, adjudicated by the Hon'ble National Green Tribunal, an order was passed on 24-5-2022. In compliance with this order, a joint

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committee was formed which inspected the Indian Potash Ltd. unit at Titavi Sugar Complex, Titavi on 20-12-2022. Based on this inspection, the Uttar Pradesh Pollution Control Board, Lucknow issued a "Show Cause Notice" on 23-1-2023. In compliance with the board's recommendations, the management submitted its report through its letter dated 01-02-2023 to the board's headquarters. A copy of this was also sent to the regional office of the Uttar Pradesh Pollution Control Board, Muzaffarnagar, a photocopy of which is attached as Annexure-1.

2. It is to note that the management had the effluent from the ETP analyzed by a third party on 28-12-2022. All samples were found to be in compliance with the board's standards.
3. It is to inform that in compliance with the directions of the Uttar Pradesh Pollution Control Board and the Central Pollution Control Board, a third-party inspection of the factory was conducted on 25-2-2023.
4. It is to note that the samples of the effluent taken during the inspection on 25-2-2023 were tested by the Uttar Pradesh Pollution Control Board. In response, the board submitted its report through its letter number S 91725 /

Water / 256 / 2023 dated 10-4-2023, stating that "the sample of the industry's effluent was found to be in compliance with the standards", a photocopy of which is attached as Annexure-2

5. It is to inform that in compliance with the board's recommendations, the management took action as communicated in its letter dated 24-4-2023, a photocopy of which is attached as Annexure-3.
6. It is to note that a team from the Central Pollution Control Board visited the factory on 30-05-2023 and took samples of the effluent for inspection.
7. It is to inform that due to the construction of the National Highway (Panipat-Khatima route) by the government for the past year, the construction agency has been converting the open drain into a closed one. Photographs of the under-construction drain are attached as Annexure-4. Due to this, the drain was completely blocked, severing any connection with the Hindan River. The factory uses its surplus water for sprinkling on boiler ash, watering plants within the mill, and, as required, for irrigation to farmers.
8. It is to note that to reduce the excess water quantity, hot water was cooled using the newly installed cooling tower

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and used in place of the tubewell water. For this, we had a water audit conducted by the National Productivity Council, which found a 50% reduction in groundwater usage during the last crushing season. This reduced the load on the ETP. Continuous capital investment has been made over the past years to improve the quality of the ETP as per the latest technology. The details of which are as follows:-

Year	**Particulars**	**Amt. (Rs in Lac)**
2019	Tanks & Blower	15.00
2020	Pond	25.00
2021	Decanter	15.00
2022	Aeration Tank	25.00
2022	STP	25.00
2022	Cooling Tower	125.00

9. The report of groundwater extraction for the last 3 years is as follows:

Year 2020-21	2021-22	2022-23

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172925KL	167951KL	85931KL

For the above data, page number 22 of the water audit report from the National Productivity Council has been attached.

10. It is to inform that the mill management promptly complied with all the orders/directions given through the "Show Cause Notice" dated 23-1-2023 issued by the Uttar Pradesh Pollution Control Board, Lucknow. The compliance report was sent to the board's headquarters through our letter dated 01-02-2023, and a copy of it was also sent to the regional office of the Uttar Pradesh Pollution Control Board, Muzaffarnagar. Technical improvements approved by the board regarding E.T.P. were immediately implemented by the mill management. On 28.12.2022, a third-party analysis of the effluent from the ETP was conducted, and all samples were found to be in compliance with the board's standards. Also, on 25.02.2023, an inspection was conducted by the third party (V.S.I) authorized by the Central Pollution Control

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Board, and the testing of effluent samples was found to be in compliance with the standards. In light of the above, we request that the notice dated 23.01.2023 be revoked so that it is not imposed in the decision of the Hon'ble National Green Tribunal dated 17-03-2023.

11. It is to inform that the mill always complies with the recommendations made in accordance with the directions of the Uttar Pradesh Pollution Control Board, Central Pollution Control Board, and the Hon'ble National Green Tribunal. No polluted effluent is discharged into the Hindan River.

We assure you that the mill has no intention of polluting the waters of the Hindan River, and the mill's entire effort is to maintain environmental purity.

In light of the above, we request that whatever recommendations were made by the board have been immediately complied with by the mill. Therefore, the proposed environmental compensation should not be imposed on the mill, as it will cause immense loss and inconvenience to the mill, the compensation for which will be impossible to provide.

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Thanking you,

Sincerely,

-sd illegible-

unit head

Attachment: As above

Copy: Regional Officer, Uttar Pradesh Pollution Control Board, Muzaffarnagar

H.O./Regd. Office : 1st Floor, Seethakathi Business Centre, 684-690, Anna Salai, Chennai - 600 006 Corporate Office : 10-B, Rajendra Park, Pusa Road, New Delhi - 110 060

ANNEXURE-R8/49

Confidential

Report

Water Audit

At

Titawi Sugar Complex
Muzaffarnagar

Submitted to

IPL

Indian Potash Limited

Submitted by

National Productivity Council
Under Ministry of Commerce & Industry, Govt. of India)
Utapadakta Bhavan, 5 – 6 Institutional Area
Lodhi Road, New Delhi - 110003

July 2023

ACKNOWLEDGEMENT

National Productivity Council (NPC), New Delhi places on record its sincere thanks to the progressive management of Indian Potash Limited (IPL) for vesting its confidence in the services of National Productivity Council (NPC) to carry out Water Audit of its Titawi Sugar Complex, Muzaffarnagar.

We are grateful to Dr. P.S. Gahlaut, Managing Director for showing keen interest in the study. We also express our sincere thanks to Dr. U. S. Teotia, Chief Manager – Agricultural Sciences for the effective co-ordination and support extended to the NPC team for conducting the audit.

Our special thanks are due to Sh. Lokesh Kumar, General Manager, Titawi Sugar Complex for facilitating the field study and extending all necessary support for completing the audit.

We would also like to thank the following plant officials of IPL Titawi Sugar Complex for their unstinted support and co-operation during field study:

- Sh. Sudhanshu Kumar, Head of Department, Engineering
- Sh. Vinay Kumar, Chief Chemist (Unit – 1)
- Sh. Yash Solanki, Jt. Head of Department, Engineering

Last but not the least, we are thankful to all executives and support staff, for the assistance provided during the entire period of the Audit.

NPC Study Team

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List of Abbreviation

IPL	Indian Potash Limited
TCD	Tonnes of cane per day
NOC	No Objection Certificate
kW	Kilo Watt
UGR	Underground Reservoir
KL	Kilolitres
ETP	Effluent Treatment Plant
STP	Sewage Treatment Plant
CPCB	Central Pollution Control Board
MT	Metric Tonne
M/m	Meter
FY	Financial Year
RO	Reverse Osmosis
DM	De-mineralized
ZLD	Zero liquid Discharge

EXECUTIVE SUMMARY

National Productivity Council (NPC) conducted Water Audit at the Titawi Sugar Complex, Muzaffarnagar between March and April 2023 at the request of Indian Potash Limited (IPL). The water audit covered performance evaluation of water consuming process in the plant and identification of implementable water conservation opportunities.

Various schemes identified for reducing water consumption and use of fresh water are briefly discussed here under;

1. **Reducing RO water Reject**

Fresh bore well water is sent to RO and DM Plant for treatment before sending it to the boiler for makeup. It is observed that about 25% of the water is rejected in the RO Plant, which is on the higher side. Therefore, the additional fresh water consumption is around 3759 KL per annum. Installing a multistage RO system would reduce the reject quantity to less than 10%. Multistage RO systems also offer several other benefits such as enhanced water quality, reduced operating costs, reduced maintenance requirements and improved system reliability.

Installing a multistage RO system would reduce fresh water consumption to the tune of 2500 KL per annum.

2. **Installing Condensate Polishing Unit for Second Condensate**

The plant generates about 200 Tonnes/hr. of second condensate i.e. the condensate from the second to the fifth evaporator. This condensate is sent to a hot water tank. A large portion of this water is used for imbibition while the balance is sent to the spray pond for cooling. The second condensate is usually high in impurities, such as organic and inorganic contaminants, as well as dissolved solids which can cause scaling and fouling in the plant equipment, reducing the efficiency of the process and increasing maintenance requirements.

In order to make the second condensate suitable for other process requirement, it is suggested to install a Condensate Polishing Unit (CPU). Installing a condensate polishing unit (CPU) and using the polished water for producing DM water would totally eliminate the use of fresh water for boilers while also improving the effectiveness of RO plant. The fresh water saving potential due to this would be about 15,100 KL per annum.

It is therefore advisable to evaluate the feasibility of installing a condensate polishing unit before considering the installation of multistage RO plant. Installation of CPU could avoid the need for replacing the existing RO plant.

3. Installing Sulphate Recovery Unit

Presence of sulphate ions in the sugar juice can cause scaling and fouling in the sugar manufacturing equipment, reducing the efficiency of the process and increasing maintenance requirements. Further, the sulphate in the juice finds its way into the Effluent treatment plant (ETP). The effectiveness of ETP is also affected due to the presence of sulphates.

It is suggested to install a Sulphate Recovery Unit (SRU) to remove sulfate ions from the sugar juice thereby preventing the formation of calcium sulfate and other insoluble precipitates. It would also result in effective treatment of the effluents.

4. Adopting Zero Liquid Discharge

Plant should consider adopting zero liquid discharge (ZLD) as a social obligation. Implementing ZLD demonstrates a commitment to sustainable practices and corporate social responsibility, which can enhance the reputation and credibility of businesses, especially in environmentally conscious industries.

Adopting a ZLD system can offer several benefits, including water conservation, environmental compliance, reduced operating costs, improved product quality, and improved brand reputation. The implementation of a ZLD system requires careful planning and design to ensure optimal performance and compliance with environmental regulations.

5. Other General Recommendations

To further reduce the fresh water consumption and waste water generation in the plant, it would be desirable to adopt the following measures;

- Construction of small pits with smooth cleaned inner surface preferably with ceramic tiles may be carried out 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. Similar arrangement may be provided at other places also. Reclamation of

gland cooling water and other cooling water may be ensured and make up may be made from cold surplus condensate.

- Condensate recovery should be ensured from all steam traps/vapour/steam line drains.
- Good housekeeping must be ensured by preventing spillages, leakages and overflows etc. which otherwise increases the load of pollutants in the waste waters coming out of the plant.
- Dry cleaning of plant floors etc. should be practiced instead of wet cleaning, as encouraged by CPCB.
- There would be a need to provide proper sludge drying facility with effective collection of water from sludge with effective recycling to minimize effluent generation and make up water requirement.

6. Way forward - New technologies

The sugar industry can benefit from various advanced technologies to enhance efficiency, productivity, and sustainability. Some of the advanced technologies that could be considered are;

1. **Automation and Control Systems**: Implementing advanced automation and control systems to enable precise monitoring and control of the sugar production process. This includes automation of milling, crystallization, drying, and packaging operations, resulting in improved process efficiency and quality control.
2. **Advanced Cane Harvesting Systems**: Mechanized cane harvesting systems, such as whole-stalk harvesters, can improve efficiency and reduce labor requirements. These systems efficiently harvest the sugarcane crop, minimize losses, and enhance overall productivity.
3. **Precision Agriculture:** Precision agriculture technologies, including remote sensing, GPS, and data analytics, can optimize sugarcane cultivation practices. This includes precise fertilizer application, irrigation management, and yield monitoring, leading to increased crop productivity and resource efficiency.

These measures not only help improve the productivity of Sugar Mills but also improve the well being of the farmers while ensuring efficient use of available resources.

The various water conservation opportunities identified during the study are summarised in the tables below;

Table 1: Summary of Recommendations

S.No.	Proposed Schemes	Annual Saving (m^3/annum)
1	Reducing RO water Reject	2500
2	Installing Condensate Polishing Unit for Second Condensate	15100
3	Installing Sulphate Recovery Unit	---
4	Adopting Zero Liquid Discharge	---
5	**Total**	**17600**

Table 2: Summary of Water Savings

S.No.	Description	Unit	Value
1	Annual Bore well Water Consumption	m^3/annum	85931
2	Savings as per table above	m^3/annum	17600
3	**% Savings Achievable**	**%**	**20.4**

The Water Audit of the plant revealed that the water saving potential of 17600 m^3/annum, which is about 20% of the total annual water consumption in FY 2022-23, can be achieved.

1. INTRODUCTION

India is the world's second-largest producer of sugar. There are about 600 plus sugar industries in India playing a vital role in economic development of the country. Most of the country's sugarcane is cultivated in the state of Uttar Pradesh, which is known as the "sugar bowl of India". With 155 sugar mills, the state is also home to the second-largest processing industry in India. Sugar is the backbone of the local economy. These sugar industries consume large quantity of water in manufacturing process and resulting in huge wastewater generation. The raw water requirement for sugar industry is 200- 400 lit/tonne and wastewater produced is about 200-300 lit/tonne of sugarcane crushed. In the production of sugar by-products such as, Press mud (3.5-4%), Bagasse (28-32%) and Molasses (3-4%) are produced.

The darker side of growth of the sugar industries in the country is environmental deterioration i.e. water, soil and air pollution. These environmental problems are affecting the future prospects for sugar industry development in the country. The sugar industry ranks third for the amount of wastewater produced, after the pulp/paper and chemical sectors. The pollution prevention practices and waste treatment methods require particular circumstance for success. Water management in sugar factories is a hot issue as the industry is pressed to reduce its water consumption and the emission of pollutants. Thus there is a need to minimize consumptive water requirement for sugar plants. Optimization/ minimization of plant consumptive water includes measures such as judicious utilization of water in different applications, adoption of reduced margins in various consumptive uses, adequate treatment for deteriorating quality of raw water, use of plant waste waters in various low grade applications and recycling of plant waste waters to maximum extent.

1.1 ABOUT THE PROJECT

In the above background and as part of on-going efforts to reduce Water Consumption, Progressive management of IPL intent to conduct water balance study of at its Titawi sugar complex located in Muzaffarnagar with technical support from National Productivity Council, New Delhi. The study is intended to be a Detailed Water audit study of the Titawi sugar complex regarding their existing operating status of water use and suggesting relevant water conservation measures to be adopted to bring down the water consumption in the plant.NPC team has carried

out the field visit for water balance study at Titawi sugar complex in Feb 2023. The observations made during the study along with the water conservation and cost reduction opportunities identified are discussed in this report.

1.2 ABOUT INDIAN POTASH LIMITED

Indian Potash Limited (IPL) was incorporated under the Indian Companies Act with the objective of promoting balanced use of Potash. Indian Potash is India's largest importer of Potash and has warehouses at all the major parts of India. The company has a PAN India dealership network to distribute Potash to the farmers. The company has also diversified into Dairy, Cattle Feed, Sugars, and Rural Warehousing.

In 2010, the Indian Potash had acquired five very old sugar factories from the U.P. Government with the overall capacity of app. 9700 TCD. IPL makes pharma grade sugar and supply to global pharmaceuticals companies such as GSK, and Abbot. IPL also supplies sugar for food and beverages Industries and services to clients such as Coke, Pepsi, Cadbury, and Nestle.

1.3 ABOUT NATIONAL PRODUCTIVITY COUNCIL

National Productivity Council (NPC) is a national level organization to promote productivity culture in India. Established by the Ministry of Industry, Government of India in 1958, it is an autonomous, non-profit organization with equal representation from Government, employers' organizations, and workers' organizations, apart from technical and professional institutions and other interests. The hon'ble Union minister for Commerce and Industry is the President of the Council. NPC promotes productivity across sectors for a socio- economically stronger India. NPC has a vibrant relationship with prominent organizations. It also represents the Government of India in the Asian Productivity Organization (APO), Tokyo. NPC, as an apex body, provides consultancy and training in various fields including Energy Management, over the past five decades and undertakes research in the areas of productivity. NPC has 12 regional offices in India and a total strength of about 135 professionals/consultants. NPC with its regional offices located in major cities / industrial cities has unique advantages in carrying out multi location assignments and assignments on all India basis.

Energy Management group of NPC has a total strength of 38 fulltime EM professional out of which 18 are certified Energy Auditors and 10 are accredited energy auditors from Bureau of Energy Efficiency. NPC provides consultancy as well as capacity building services to several international, national as well as unit level clients. EM Group offers consulting services in various sectors including industry, power generation, distribution, commercial, agriculture and SME clusters.

1.4 SCOPE OF WORK

The scope of work of the water audit is to review the present water consumption pattern, establish the water consumption in different applications in the plant, outline the utilization of water in various streams, identifying and quantifying the areas of losses for achieving optimum water balance and suggest ways & means of reducing its wastage, towards improving water efficiency.

1.5 PROJECT METHODOLOGY

The methodology adopted for carrying out the assignment is as follows:

- **Data collection through the following sources:**
  - √ Discussion with plant executives
  - √ Past records
  - √ Available technical literature
  - √ Equipment specification
- **Field studies involving:**
  - √ Flow measurement of major streams using ultrasonic flow meter
  - √ Pressure readings were taken from pressure gauges installed in discharge lines of water pumps
  - √ Power drawn by the water pumps was measured by power analyzer (ALM-10).
- **Detailed analysis of the data obtained which include:**
  - √ Performance evaluation of various pumps installed in the plant

√ Comparison of operating efficiencies of these equipments with rated values wherever possible.

√ Establishing margins for performance improvement

- **Identification of water conservation options.**
- **Preparation of the draft report.**
- **Preparation of final report, incorporating corrections based on the comments given by the management on the draft report.**

1.6 INSTRUMENTS USED FOR THE STUDY

Apart from Onsite instruments, portable instruments used in the study include:

a) Power Analyzer- for LT Power Measurement

b) Potable Ultrasonic Water Flow meter

2. PROCESS DESCRIPTION

The sugar plant of Indian Potash Limited (IPL) at Titawi Sugar Complex has two production units for the production of refined sugar. The two sugar production units in the complex are classified as Unit – I and Unit – II. Unit – I is based on conventional sulphitation process while Unit – II is based on refinery process, to produce sulpur free sugar. The total capacity is 10500 TCD.

The cane crushing capacity of Unit –I is 270 Tonnes per Hour i.e. around 6500 Tonnes of Cane per day (TCD). The cane crushing capacity of Unit – II is 175 Tonnes per Hour i.e. around 4000 Tonnes of Cane per day (TCD).

Sugar Manufacturing Process in brief:

The various operations involved in the production of sugar are as follows;

- Cane harvesting (Mechanical / Manual) and Transportation.
- Cane preparation.
- Milling-Juice extraction from cane
- Clarification of cane juice (Sulphitation /Phosphatation process)
- Evaporation (Removal of water from clarified juice)
- Vacuum pan Boiling (Crystallization of sugar)
- Centrifuge (Separation of sugar crystals from Molasses)
- Drying and grading of sugar.
- Bagging and warehousing.

The sugar production process for Unit – 1 (Sulphitation) and Unit – 2 (Phosphatation) is briefly described below.

Sugar Production Process

Cane Preparation

The cane as received by the plant is prepared for milling in the first process of sugar production. The revolving hubs, called kicker breaks the cane binders and makes the cane level uniform in the cane carrier. The revolving blades called knives that cut cane stalks into chips but extracts no

juice. The revolving hammers called shredders/ fibrizers, that shred the cane into long and thin pieces and opens the juice holding cells of cane but extracts no juice. All the cane preparatory devices are located on the cane carrier, which takes the cane to the milling tandem.

Milling

Extraction of juice from sugarcane is carried out in conventional mills. At the milling station, the prepared cane is passed through roller mills where juice extraction takes place. The combination of 3 rollers arranged in triangular form is the used in the milling unit. The unit uses four sets of 3 roller mills for milling and crushing of cane.

Each mill unit is driven by separate D.C electric motor, steam turbines. In order to enhance juice extraction, hot water is sprayed over the bagasse blanket as it emerges from each mill. The amount of imbibition process involves the use of recycled hot water.

The products of juice extraction process are mixed juice and bagasse. A major portion of bagasse is sent to boilers for use as fuel for steam generation and the excess is either sent to open storage for future use and sale. The mixed juice is sent to clarification station after coarse straining and removal of fine bagasse particles.

Clarification of Cane Juice

For clarification of juice from milling, Sulphitation is the clarification process adopted in unit – 1 at the plant. At the clarification point, the juice is subjected to thermal and chemical treatments. Juice is heated to 70°C temperature in juice heaters and then passed into juice sulphitation vessel. Milk of lime Ca $(OH)_2$ prepared in a lime slacker by slaking limestone with hot water is added to the tank and the pH is raised from 5.5 to 9.00. Then SO_2 derived from a sulfur burner is bubbled through the juice till the pH is lowered to 7.00 – 7.10. This procedure provides maximum flocculation to remove impurities.

The limed and sulphited juice is subsequently heated to 105^0C. The above treatment results in the formation of insoluble lime salts. Heating the juice slightly above the boiling point (i.e. above 103^0C) coagulates albumins and some of the fats, waxes and gums present in cane juice and precipitates the suspended solids as well as fine particles.

The precipitated solids are separated by sedimentation. The products of clarification are clarified juice and settled impurities in the form of mud. The mud from the clarifier is filtered in rotary vacuum filters. The products of mud filtration are filtrate and filter cake. Filtrate is returned to

the mixed juice tank and filter cake (Pressmud) is used for composting or applied in fields as soil conditioner. The clarified juice (also known as clear juice) from the clarifier is heated in a juice heater to 110 ^{0}C and then sent to Evaporators for concentration.

Evaporation

In the evaporator, the preheated clear juice is evaporated in multiple effect evaporators. A quintiple evaporator system consisting of 5 bodies is used in Unit - 1.

Steam is supplied to boil juice in the first body, the vapor generated from it is used to boil juice in succeeding bodies. The vapor from the final body is condensed by direct contact with cooling water in a barometric condenser or multi-jet condenser. Condenser that maintains stepwise pressure and temperature drop across the bodies of the multiple effect evaporator.

The steam condensate from the first evaporation body and the vapor condensate from the second body are usually free from entrained sugar and are normally recycled for use as boiler feed water. The condensate from third, fourth and fifth bodies are recycled for use as process hot water.

The concentrated juice leaving the last body of the evaporator is called syrup and is subjected to a second sulphitation. SO_2 gas produced from the sulfur burner is bubbled through the syrup in the syrup sulphitation vessel and the pH of 5 is attained. The coloring matter present in the syrup is bleached by sulphitation. The sulphured syrup is then sent to pan station for pan boiling and crystallization.

Vacuum Pan Boiling

The main crystallisation of sugar takes place during pan boiling in vacuum pans of the boiling house. The function of the vacuum pan is to produce and develop satisfactory sugar crystals from the syrup. Vacuum pans are single effect evaporators and a barometric condenser supplied with cooling water is used to condense vapor from the pans by maintaining sufficient vacuum. Sulphited syrup is concentrated in pans by evaporation of water under vacuum using vapors from the first effect of the evaporator or exhaust steam as heating medium.

Crystallisation takes place when the syrup is saturated with sugar. At this point, seed grain is added to serve as nuclei for the sugar crystals, and more syrup is added as water evaporates. The growth of the crystals continues till the pan is full. The crystals and mother liquor form a dense

mass known as massecuite. The contents of the pan are then discharged into crystallisers. Massecuite boiling is classified as A, B and C according to the purity of the massecuite.

Mother liquor obtained from A massecuite curing serves as feed material for B massecuite boiling and the mother liquor obtained from B massecuite curing serves as feed material for C massecuite boiling. The molasses from C massecuite curing has residual sugar and its recovery is uneconomical. Hence, it is stored in steel tanks after weighing and sold to distilleries and cattle feed manufacturers.

Due to the presence of impurities in the syrup, the sugar present in it could not be crystallized in single stage. To recover maximum sugar from syrup, three massecuite boiling system is adopted. A and B massecuites are higher grade massecuites and C massecuite is the low grade massecuite. Condensers attached to evaporators and pans are the major units using about 90% of the cooling water required by the plant.

Crystallization

The crystallization of sucrose from the mother liquor in low grade massecuite cannot be carried to sufficient completion in the vacuum pan alone due to high viscosity and rapidly diminishing crystallization rates. Therefore, the massecuite is discharged into a crystallizer where crystallization in motion takes place until the mother liquor (molasses) is adequately exhausted. This involves a cooling operation in which it cools from pan temperature to near ambient temperature. The progressively lowered temperature reduces the solubility of sucrose and forces crystallization to continue.

Crystallizers are cylindrical vessels with low speed stirrers. The cooled massecuite from the crystallizers is reheated before feeding to centrifugals for separation of sugar crystals. A and B massecuites are cooled in air cooled crystallizers and then sent to centrifugals without reheating.

Centrifuge

The massecuite from the crystallisers is drawn into the centrifugal machines to separate out the sugar crystals from the mother liquor (molasses). The cylindrical basket centrifuges with perforated sides permit the molasses to drain out. Washing the massecuite, with hot water or steam or both, is a common practice. The mother liquor molasses is returned to the next vacuum pan for reboiling

In three massecuite boiling scheme, the first boiling of raw syrup yields A massecuite which is centrifuged to produce A sugar and A heavy and A light molasses. A light molasses is recycled to a boiling. A heavy molasses is sent to B massecuite boiling and B massecuite is produced. B massecuite is cooled in crystallisers and cured in B centrifugals which yields B sugar and B heavy molasses. The B heavy molasses is sent to C pans for reboiling and C massecuite is produced. C massecuite is cooled in air and water cooledcrystallisers and then cured in another centrifugal to yield C fore sugar and final molasses.

Drying Of Sugar and Bagging

The purged a sugar from a centrifugal machine is discharged into an open vibrating sugar hopper to enable natural drying or hot air is passed through the sugar to aid drying. After drying, sugar is cooled by blowing cold ambient air through it. After drying, sugar is sent for sieving in the vibrating sugar grader. The dried final sugar product is weighed and bagged.

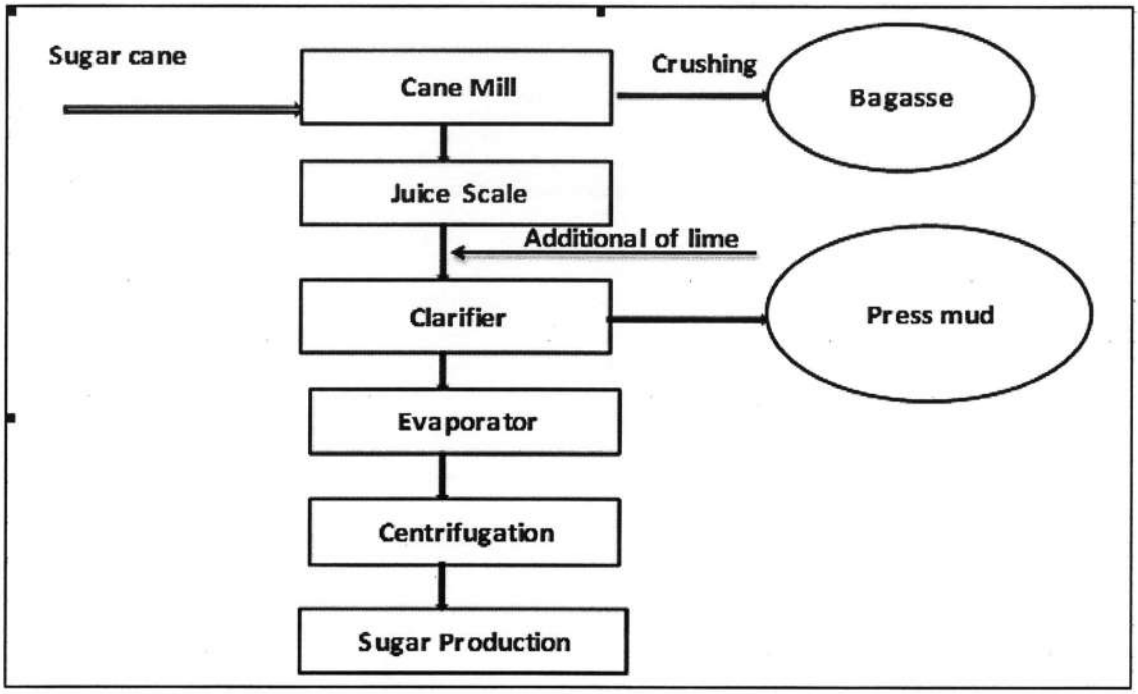


Figure 1: Sugar Production Process

3. PLANT WATER DISTRIBUTION SYSTEM

The water distribution system in Titawi sugar complex can be classified into three streams namely,

1) Fresh Water System
2) Cold water system
3) Hot water system

3.1 Fresh Water System

The plant has 03 nos. of bore wells to meets its fresh water requirement. These borewells are operated as per requirement and the cold water is used mainly for industrial process, machinery cooling and domestic use.

The unit has NOCs for ground water abstraction for all the 03 bore wells from Ground Water Department, Ministry of Jal Shakti, Government of Uttar Pradesh. The NOCs are valid upto 13-03-2025. The details are as follows;

Table 3: Details of NOC at Plant

Borewell Reference	Rate of Withdrawal (m^3/hr.)	Maximum Allowable Running Hours (per day)	Depth of Borewell (meter)	Pump motor rating (kW)	Maximum Allowable Annual Extraction (m^3/annum)	Whether Fitted with Water Meter
Borewell 1 (REG018075)	100	4	150	30	1,40,000	Yes
Borewell 2 (REG012285)	125	1	110	30	45,625	Yes
Borewell 3 (REG011159)	90	5	120	30	1,57,500	Yes
Total Allowable Annual Abstraction					**3,43,125**	

The fresh water from borewell 1 is pumped to an overhead tank for domestic use and the fresh water from borewell2 is supplied to the water treatment plant for producing DM water for the boilers. All the balance fresh water is sent to an underground reservoir (UGR). The capacity of the UGR is 1625 m^3.

The water from the UGR is pumped to overhead tanks for supply to Unit-I and Unit-II. The surplus water from the overhead tank is collected back in the UGR. The Surplus Process water is also collected in the UGR.

During the water audit, 2 Borewell were found to be in operational condition while the third borewell was non-operational. Flow meters are installed at all the three bore wells. Total water abstracted through bore wells is recorded on a daily basis. As per the plant records, average water consumption during FY 2022-23 was 85931 KL. The fresh water withdrawal during the last three years, as per plant records is given in table below;

Table 4: Water Withdrawal Details (KL)

Water Withdrawal, KL	FY 2020-21	FY 2021-22	FY 2022-23
Bore well-1	56000	43607	10563
Bore well-2	116925	124344	75368
Total	**172925**	**167951**	**85931**

The trend in total water withdrawn in last three financial years is shown below:-

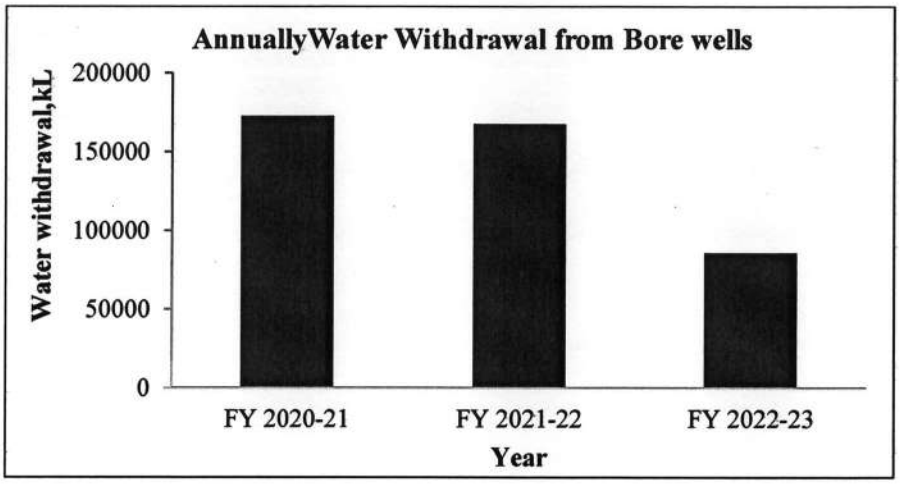
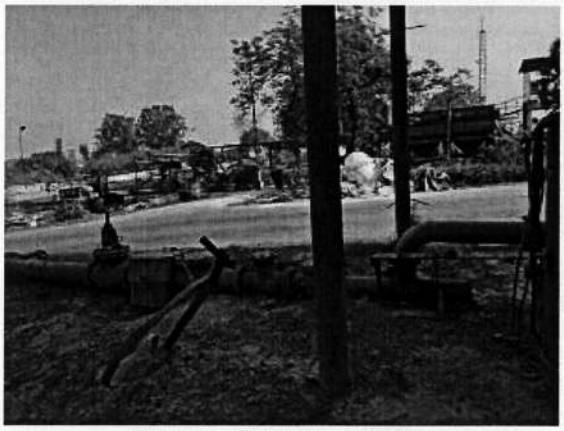


Figure 2: Annually Water Withdrawn Trend

The locations of the borewells are depicted in photographs below;

Bore well-1 (Colony)

Bore well-2 (Near ETP)



Bore well-3 (Near ETP)

The trend in total water withdrawn in FY 2022-23 from borewell 1&2is shown below:-

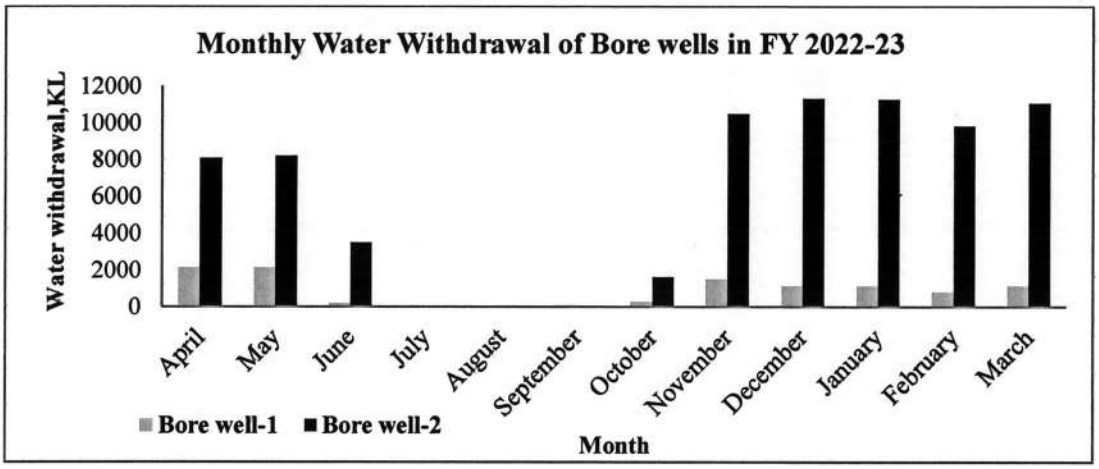


Figure 3: Monthly Water Withdrawal of Bore wells in FY 2022-23

Borewell 3 has not been in operation for the past few years.

The month wise water withdrawn from each borewell, during FY 2022-23, FY 2021-22 & 2020-21 is given in the table below;

Table 5: Monthly Water Withdrawn (in KL)

Water Withdrawal Details (in KL)									
	FY 2020-21			FY 2021-22			FY 2022-23		
Month	Bore well-1	Bore well-2	Total	Bore well-1	Bore well-2	Total	Bore well-1	Bore well-2	Total
April	8940	15369	24309	10178	13822	24000	2113	8080	10193
May	11150	23365	34515	6401	18394	24795	2118	8202	10320
June	0	7143	7143	5626	18374	24000	178	3482	3660
July	0	7472	7472	4529	20271	24800	50	0	50
August	0	5667	5667	3153	11847	15000	41	0	41
September	0	3025	3025	118	0	118	69	0	69
October	8337	3520	11857	195	0	195	267	1605	1872
November	9580	3020	12600	2950	8870	11820	1497	10489	11986
December	7845	1546	9391	3141	8695	11836	1131	11335	12466
January	6800	46743	53543	3305	8235	11540	1134	11259	12393
February	1674	54	1728	1956	7411	9367	810	9837	10647
March	1674	1	1675	2055	8425	10480	1155	11079	12234
Total	**56000**	**116925**	**172925**	**43607**	**124344**	**167951**	**10563**	**75368**	**85931**

The fresh water from borewell 1 is pumped to an overhead tank for domestic use and the fresh water from borewell 2 is supplied to the water treatment plant for producing DM water for the boilers. The balance fresh water is sent to an underground reservoir (UGR). The capacity of the UGR is 1625 m^3. The cold water requirements of the plant are met from the UGR.

The fresh water consumption details, as per plant records is given in table below;

Table 6: Fresh Water Consumption Details

Sr.No.	Particulars	Quantity (m^3/hr.)
1	R O water	30
2	Chemical Preparation	0.5
3	Seed mixer	1
4	Oil cooling of mill	12
5	Fire Hydrants water	1

Sr.No.	Particulars	Quantity (m^3/hr.)
6	Pump's Gland cooling water	4
7	Floor washing	4
8	Juice heater quad cleaning	10
9	Ion Exchange column	10.4
10	Lab water	2
11	Fish pond over flow	1
12	Domestic	3
	Total	**78.9**

3.2 Cold Water Consumption

Cold water used in the plant for turbine cooling, Air compressors, molasses tank cooling, gland cooling, floor washing, cleaning of juice heater & evaporator, Co-generation plant, domestic use etc. Flow Meters are provided for measuring the water consumption in most of the usage points. Cooling water is supplied to all the machinery from the UGR. Separate cooling tower is installed for cooling of power house and boiling house machinery cooling water.

The cold water distribution in the plant is given in Table below.

Table 7: Cold Water Distribution Details

Sr.No.	Particulars	Quantity (m^3/hr.)
1	Turbine cooling & instrument compressor	250
2	Feed pump cooling water	4
3	Mill house bearing, FMG gear, Hydraulics	200
4	Cane preparatory devices	10
5	1ST mill oil cooler	15
6	V.F condenser, vacuum pumps &S/F comp.	40
7	Condensate pumps at evaporator station	4
8	Oil coolers of cfg. Machines	2
9	B&C vertical crystallizers	40
10	Sulphur burner cooling	45
11	ACF air compressor and AC unit	50
12	Cold water for molasses tank cooling	50
	Total	**710**

Month-wise total Cold Water Consumption for FY 2022-23 is given below in the table;

Table 8: Monthly Cold Water Consumption for FY 2022-23 (in KL)

Month	Process	Boiler	Domestic
Apr-22	24	2352	2113
May-22	23	1840	2118
Jun-22	24	0	178
Jul-22	21	0	50
Aug-22	24	0	41
Sep-22	20	0	69
Oct-22	22	0	267
Nov-22	18	1671	1447
Dec-22	25	2196	1131
Jan-23	24	2474	1134
Feb-23	25	2107	810
Mar-23	28	2177	1155
Total	**278**	**14817**	**10513**

3.3 Hot water

The sugarcane itself contains about 70% of water. During processing of sugarcane, this water is available in the form of condensate. Water required for sugar manufacturing process is used from condensate available, which is more than sufficient. Moreover, sugar mill always get excess condensate. The quantity of excess condensate generation is depends on water losses through process.

Hot water in the plant is required for mill imbibitions, for milk of lime preparation, for molasses conditioning, for melter, for water movement in pan, for boiler feed water, and for Centrifugal machines.

The process wise hot water consumption at Titawi sugar complex, as per the plant records is provided in the table below:

Table 9: Hot Water consumption Details-Unit 1 (in KL)

Particular Unit-1	Per Day Total	Total Water consumption in season 2022-23	Contribution (%)
Molasess Conditioner Water Flow	12	2287	0.3%
Milk of Lime Flow	88	16251	2.0%
A Batch Pan Water Flow	102	18814	2.4%
B&C Centrifugal Machine Flow	45	8234	1.0%
A&B&C Batch Pan Water Flow	147	27031	3.4%
B&C Sugar Melter Flow	91	16681	2.1%
FFE Hot Water Flow	4	797	0.1%
Vacuum Filter Water Flow	426	78312	9.9%
B&C Centrifugal Machine	337	61949	7.8%
A Centrifugal Total Consumption	89	16394	2.1%
Imbibition-01 Water Flow	2952	543192	68.8%
Total	**4293**	**789942**	

Table 10: Hot Water consumption Details-Unit II (in KL)

Particular Unit-II	Per Day Total	Hot water consumption in season-2022-23	Contribution (%)
B&C Sugar Melter and Molasses Flow	99	18253	3.0%
B&C Pan Water Flow	37	6751	1.1%
A Batch Pan Water Flow	55	10048	1.6%
B&C Megma Mix And Centrifugal Machine	90	16599	2.7%
Vacuum Filter Water Flow	193	35484	5.8%
A Centrifugal Machine Total Consumption	400	73558	11.9%
FFE Water Flow	196	36009	5.9%
Imbibition-1 Flow	2278	419169	68.0%
Total	**3348**	**615871**	

3.4 Specific Water Consumption

Specific water consumption refers to the amount of water used per unit of output or activity. It is a measure that indicates the efficiency of water use in various processes. The plant management

is serious about reducing water consumption to promote sustainable water management and conservation.

The monthly variation in specific water consumption in the plant during the financial year 2022-23is given in the table below;

Table 11: Specific Water Consumption Details during year 2022-23

Year	Water Withdrawn (KL)	Sugar Production (MT)	Specific Water Consumption (Litres/MT)
Apr-22	10193	28363	359
May-22	10320	16861	612
Jun-22	3660	NA	
Jul-22	50	NA	
Aug-22	41	NA	
Sep-22	69	NA	
Oct-22	1872	NA	
Nov-22	11986	14673	817
Dec-22	12466	31019	402
Jan-23	12393	30908	401
Feb-23	10647	29959	355
Mar-23	12234	30541	301
Total	**82044**	**182324**	**450 (Avg.)**

Graphical representation of month wise specific water consumption in the plant during the financial year 2022-23 is given below;

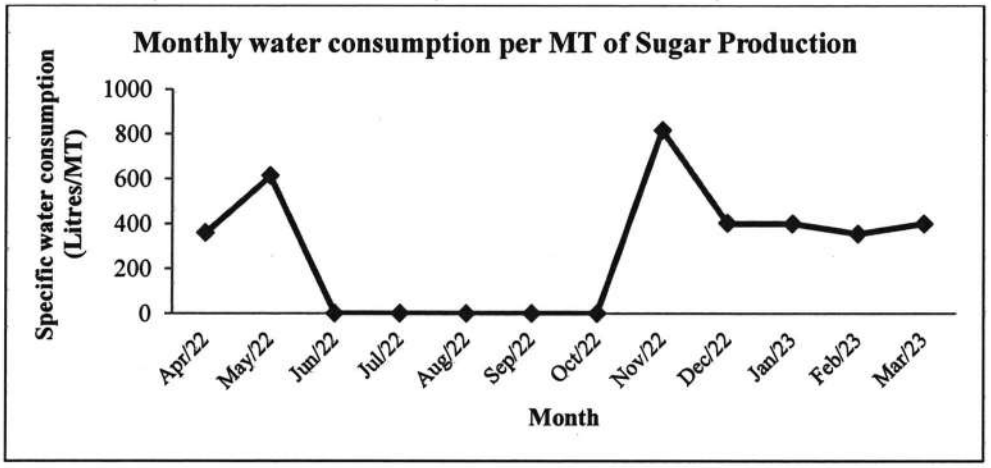


Figure 4: Monthly water consumption per MT of Sugar Production

Titawi sugar complex has adopted several measures for reducing water consumption including condensate management and water recycling and also to minimize the effluent generation by installing cooling towers and reservoirs of appropriate capacities. Some of the measures implemented by the plant mentioned below;

- Installation of sulphate removal system.
- Installation of additional cooling tower for maintaining injection water temperature.
- Installation of STP for colony/factory for treatment of domestic waste water.
- Modification of mill bearing and centrifugal bearing from oil cooling to grease.
- Conversion of hot condensate individual tank system to syphon system.

3.5 Water Treatment Plant

For meeting the boiler make-up water requirements, the plant has installed one RO plant along with a DM plant. The water from borewell (ETP area) is pumped into a raw water storage tank. The capacity of theborewell pump is 70 m^3/hr. The water pumped from the borewell is stored in a raw water storage tank. The capacity of raw water storage tank is 1000 M^3. The water from raw water storage tank is pumped into the Pressure Sand Filter (PSF) using a raw water pump having a capacity of 70 m^3/hr. The filtered water from PSF filter is pumped into the RO water plant.

The Reverse osmosis (RO) system within the DM water plant is two stages RO system designed for a capacity of 45 m^3/hr. of treated water. The RO feed pump is designed for water flow of 64 m^3/hr. and head of 149 meters. The RO water from RO plant is fed into the degasser tank. The water from degasser tank is pumped into the DM plant by the degasser water pump. The water from DM plant is stored in two numbers of DM water tank. The capacity of each DM water tank is 750$M^3$and pumped to all the boilers.

The schematic diagram of water treatment system is depicted in the figure below;

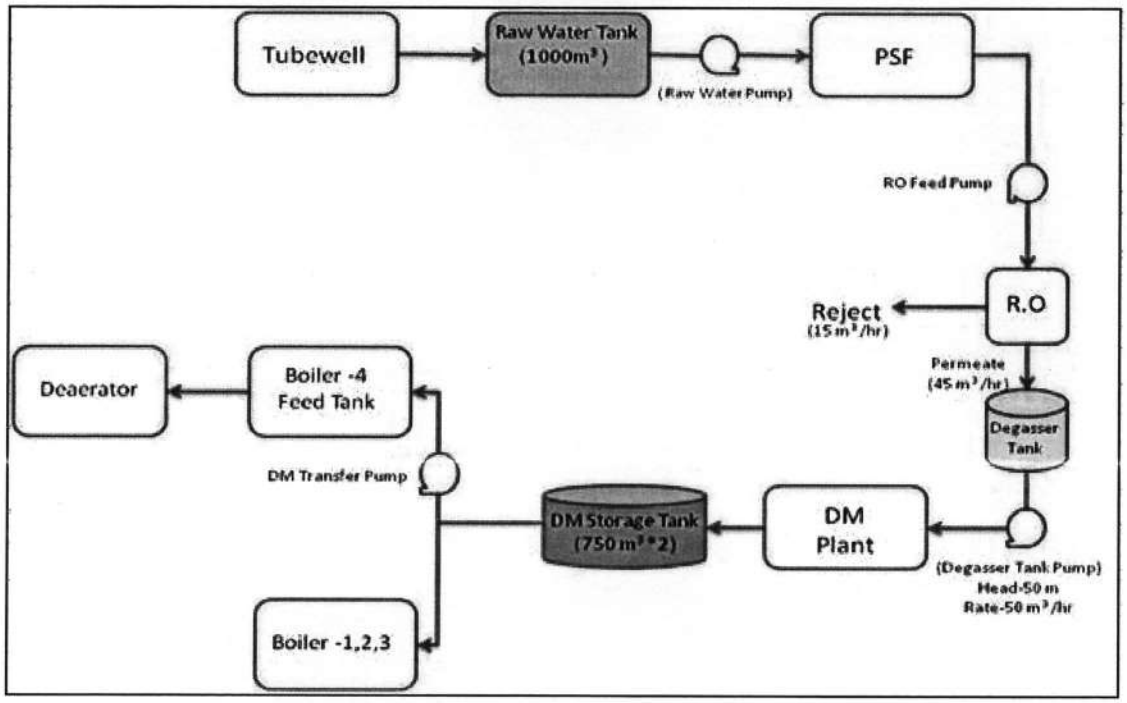


Figure 5: Schematic Diagram of DM Water Plant

The table below indicates the design details of different pumps installed in the DM water plant.

Table 12: Design details of pumps installed in the DM water plant

Sl. No.	Name of the pump	No. of Pumps	Design Flow (m^3/hr)	Design Head (M)	Motor Power (KW)
1.	Borewell (ETP area)	1	70		
2.	Raw Water Pump	2(1+1 Standby)	70	45	18.5
3.	RO Water feed pump	2(1+1 Standby)	64	149	38
4.	Degasser Water Transfer Pump	2(1+1 Standby)	50	50	11
5.	DM Water transfer pump	2(1+1 Standby)	85	40	22

The Details of treated water from RO Plant for last three financial years is given below;

Table 13: RO Plant Treated water details

Year	RO Inlet (KL)	RO Outlet (KL)	Reject Water (KL)
FY 2020-21	16507	11330	5177
FY 2021-22	16300	9844	6456
FY 2022-23	15207	11448	3759

Monthly treated water from RO Plant for FY 2022-23 is given in the table below;

Table 14: Monthly Treated Water Details of RO Plant for FY 2022-23

Month	RO Inlet (KL)	RO Outlet (KL)	Reject Water (KL)
Apr-22	2352	1450	902
May-22	1987	1418	569
Jun-22	0	0	0
Jul-22	0	0	0
Aug-22	0	0	0
Sep-22	0	0	0
Oct-22	0	0	0
Nov-22	1671	1450	221
Dec-22	2196	1422	774
Jan-23	2474	1440	1034
Feb-23	2177	1430	747
Mar-23	2350	1421	929
Total	**15207**	**11448**	**3759**

During the field study flow measurements were carried in the plant. The observations are indicated in the table below;

Table 15: Measurement Taken during Field Study

S.No.	Particular	Measured Flow (m^3/hr.)	Measured Velocity (m/s.)	Piezometer Level Recorder (Meter)
1	Borewell-1 (Colony supply)	84.5	0.64	12.15
2	Borewell-2 (Near ETP plant)	59.0	0.47	14.73
3	Borewell-3 (Baggase Yard)	96.9	0.74	–

3.6 Water Balance

The water distribution system depicting the water balance for the plant, based on the plant records, is depicted in the figure below;

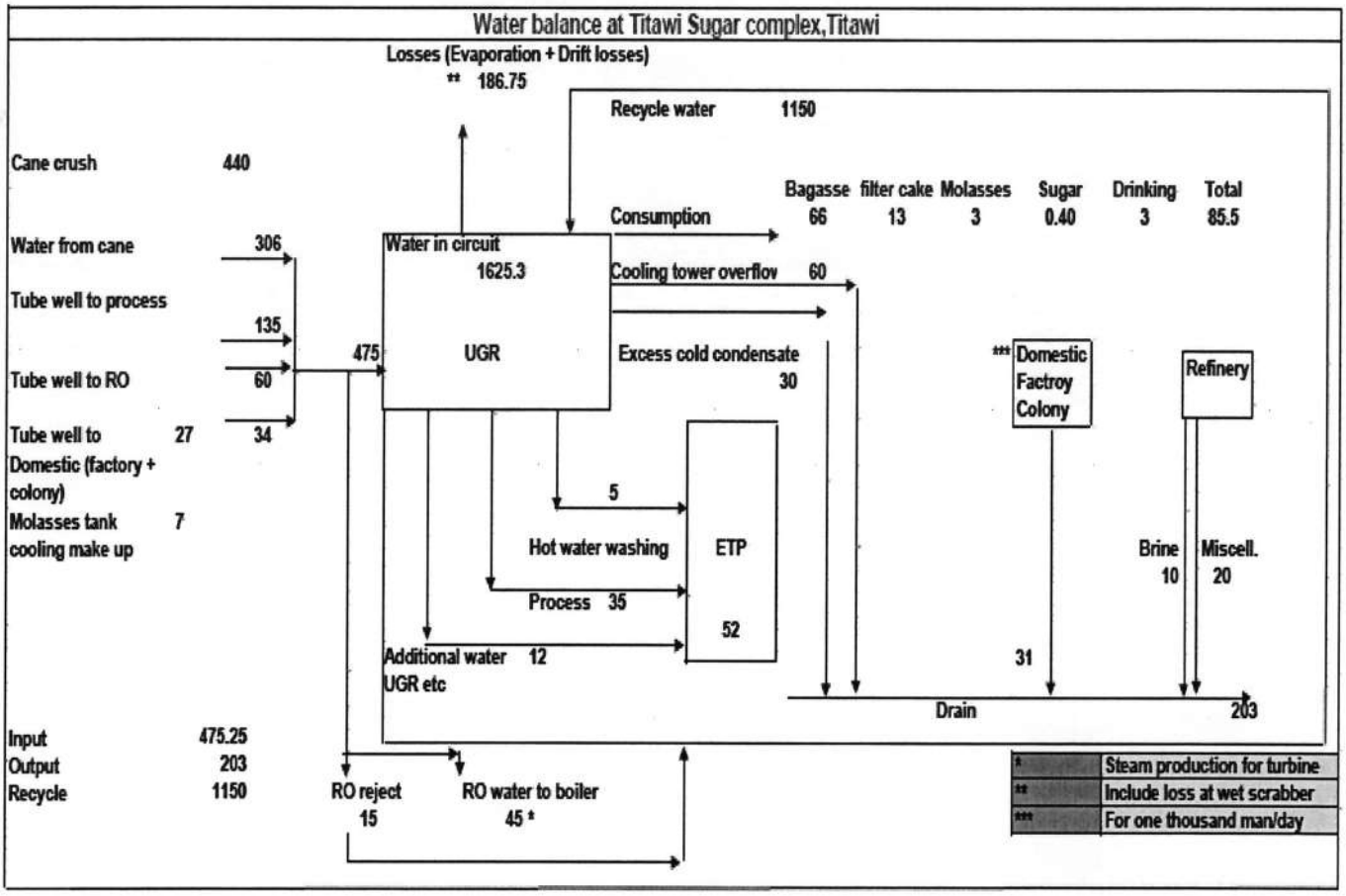


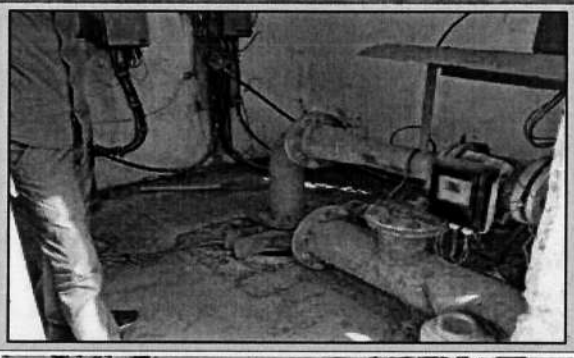
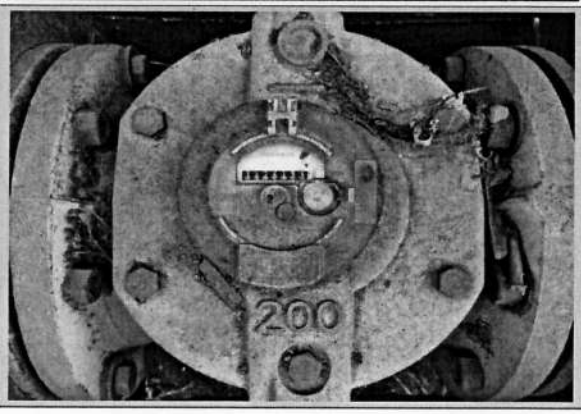
Figure 6: Water Balance Diagram

3.7 Water Metering & Monitoring System

Monitoring is the most important prerequisite for efficient water management. Thus, in the water supply network, it is necessary to have a robust system of monitoring. Water metering and monitoring system enhances water management practices by providing accurate measurement, proactive leak detection, and actionable data for effective consumption control and conservation.

During the field visit, the available flow meters were identified, and their working conditions were checked.

Detail List of meters as depicted below;

Particulars	Flow Meter Type	Photo
Borewell-1 Meter (Colony)	Electromagnetic	
Borewell-2 Meter (Colony)	Electromagnetic	
Borewell-3 Meter	Electromagnetic	

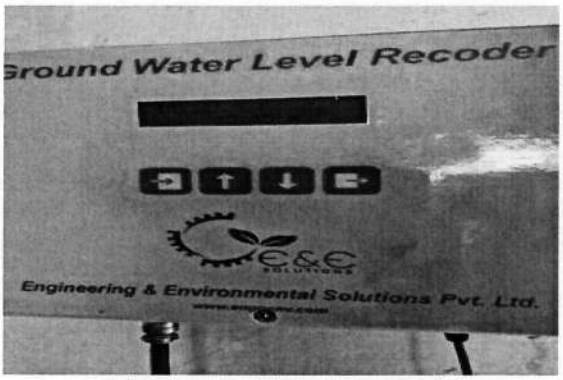
3.8 Piezometer

Piezometers typically consist of a slender tube or pipe inserted vertically into the ground or a body of water. The lower end of the piezometer is open to the fluid, allowing it to come into contact with the surrounding soil or groundwater. The upper end of the piezometer is connected to a pressure gauge or a monitoring system, which measures the pressure exerted by the fluid.

When a piezometer is installed in the ground, it can provide valuable information about the water table level, the direction and flow of groundwater, and the stability of soil layers. This information is crucial for various applications such as designing foundations for buildings, assessing slope stability, monitoring groundwater contamination, and evaluating the effectiveness of drainage systems.

For monitoring the ground water level at site the plant has installed two piezometers inside the premises as depicted in the following pictures;

Piezometer 1 (Near Colony Overhead tank)



Piezometer 2 (Bagasse Yard)

3.9 Rain Water Harvesting Details

Rainwater harvesting is a method of collecting and utilizing precipitation from a catchment area. It involves the collection and storage of rainwater for various purposes such as irrigation, household use, and groundwater recharge. By implementing rainwater harvesting systems, we can augment the natural replenishment of groundwater.

One of the key benefits of rainwater harvesting is the artificial recharge of groundwater. When rainwater is collected and stored, it can be released gradually into the ground, allowing it to percolate and recharge the underlying aquifers. This helps in maintaining the water table and sustaining the availability of groundwater resources.

Rainwater harvesting also offers several other advantages, such as reducing reliance on external water sources, mitigating storm water runoff and flooding, and conserving potable water supplies. The Rainfall at Site is approximately 904 mm. For rainwater harvesting purpose the plant has constructed three nos. of pits. The details of ground water recharge pits are given in the table below;

Table 16: Rain Water Harvesting Pit Details

RWH Pit No.	Location	Size (in m)
1	Near Bachelor Hostel	2.5*2.5*3
2	Opposite Godown no 8	
3	Opposite Godown no 8	

The details of ground water recharge potential by the rain water harvestingis given in the table below;

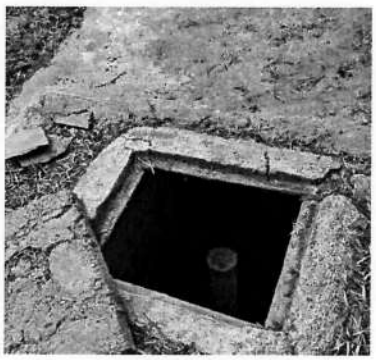
Table 17: Recharge Potential through Rain Water Harvesting

Rain Collection Area	Area (sqm)	Runoff coefficient	Rain Fall (Meter)	Peak Rain Fall for 15 Minutes (Meter)	Recharge potential cu. m./day
Roof Top of building/ Shed	59820.41	0.85	0.904	.06	755
Road/ Paved area	25927	0.75	0.904	.06	291
Green park area	203154.32	0.15	0.904	.06	457
Total	**288901.73**				**1504 cu. m./day**

The photographs of various recharge pits and their locations are presented below;

RWH Pit No. 1 (Near Colony Overhead tank)

RWH Pit No. 2 (Near Guest House)



RWH Pit No. 3 (Near Guest House)

4. WASTE WATER GENERATION & TREATMENT DETAILS

4.1 Waste Water Generation

Wastewater in the plant is produced mainly by cleaning operations. Washing of milling house floor, various division of boiling house like evaporators, clarifiers, vacuum pans, centrifugation, etc. generates wastewater. Also, wash water used for rotary vacuum filter and periodical cleaning of heat exchangers and evaporators with NaOH and HCL to remove the scales on the tube surface contributes organic and inorganic pollutant loadings to wastewater. Leakages from pumps, pipelines, centrifuging house also contribute to wastewater produced. Except this, wastewater is also produced from boiler blow down and spray pond overflow (condenser cooling water) which is discharged as wastewater.

Total wastewater generation from sugar mill is 206.87 L/t of cane, which is more than wastewater generation norms of CPCB. However, all the figures are estimated on the basis of data available. Waste water generation can be achieved to 200 L/t of cane by using spray pond water for cleaning of juice heaters and evaporators. It is required to confirm the quantities of wastewater generation during crushing season by actual measurement.

4.2 Waste Water Treatment Details

Sugar is the most important food supplement of our daily diet. During the production of sugar, large volume of water is used by sugar mills for processing, and produces large amount of wastewater. The sugar mill wastewater have color, organic compounds, low pH, high temperature, BOD, COD, total dissolve solid (TDS), sludge, press mud and bagasse etc. If this wastewater is released in the environment before the treatment, it will cause harmful effect on aquatic life, animals, plants, human being and also change the soil properties.

Therefore, it is necessary to treat the wastewater before their disposal. Three important treatment methods i.e. physical, chemical and biological are employed to treat the wastewater. Biological treatment of sugar mill wastewater has several significant advantages over other available methods. Treatment of sugar mill wastewater mainly affected by pH and temperature of effluents, biomass during the reaction, reaction time, type and speed of reactions, aerobic or anaerobic conditions, presence of catalyst, inhibitor, nutrients and concentration of the sulfide and its other compound in the wastewater.

The treated wastewater can be reused in the industry for processing and may also be used for ferti-irrigation for agriculture or other purposes like compost and biofertilizers within the limit prescribed by the Central Pollution Control Board. Reuse of treated effluent can reduce the fresh water demand in various sectors. Treated effluent contains well balanced chemicals with low toxic metal ion. The diluted treated effluent have shown significant increase in chlorophyll, carotenoids, total sugar, amino acids, protein contents and suitable for seed germination and seedling growth over the bore well water and undiluted treated effluent.

3.9.1 Effluent Treatment Plant

The unit is having ETP with treatment capacity of 2150 KLD for treatment of effluent generated from various sections of sugar mill. The unit has installed magnetic flow-meter at inlet of ETP and electromagnetic flow meter flow meter at the outlet of ETP. The detail of ETP is given below;

- The ETP comprises of Oil skimmer & Bar screen chamber → Equalization tank → pH correction tank → Primary Clarifier → Pre-aeration tank→ Aeration Tank-I → Secondary Clarifier-I → Chlorine contact tank→ Multigrade filter (MGF) → Activated Carbon Filter→ Sludge dewatering system (Decanter). Lime dosing was also done before primary clarifier & further before secondary clarifier; urea & DAP were added.
- No logbook was maintained for chemical consumption at ETP.
- For storage of treated effluent, the unit has one impervious lagoon of capacity 3200m^3. The treated effluent from the ETP is stored in the lagoon which is further distributed to nearby farmer's field for irrigation as per the demand. To measure the quantity, of treated effluent supplied for irrigation, the unit has installed flow meter at the outlet of lagoon.
- The unit has installed mechanical sludge dewatering system (sludge decanter). The dried cake is distributed to farmers for utilization as manure.
- The unit has setup environmental laboratory for analysis of daily parameters (pH, BOD, COD, TSS etc.). The unit has maintained the ETP log book for daily analysis of ETP effluent parameter.

The process flow diagram of ETP is depicted below;

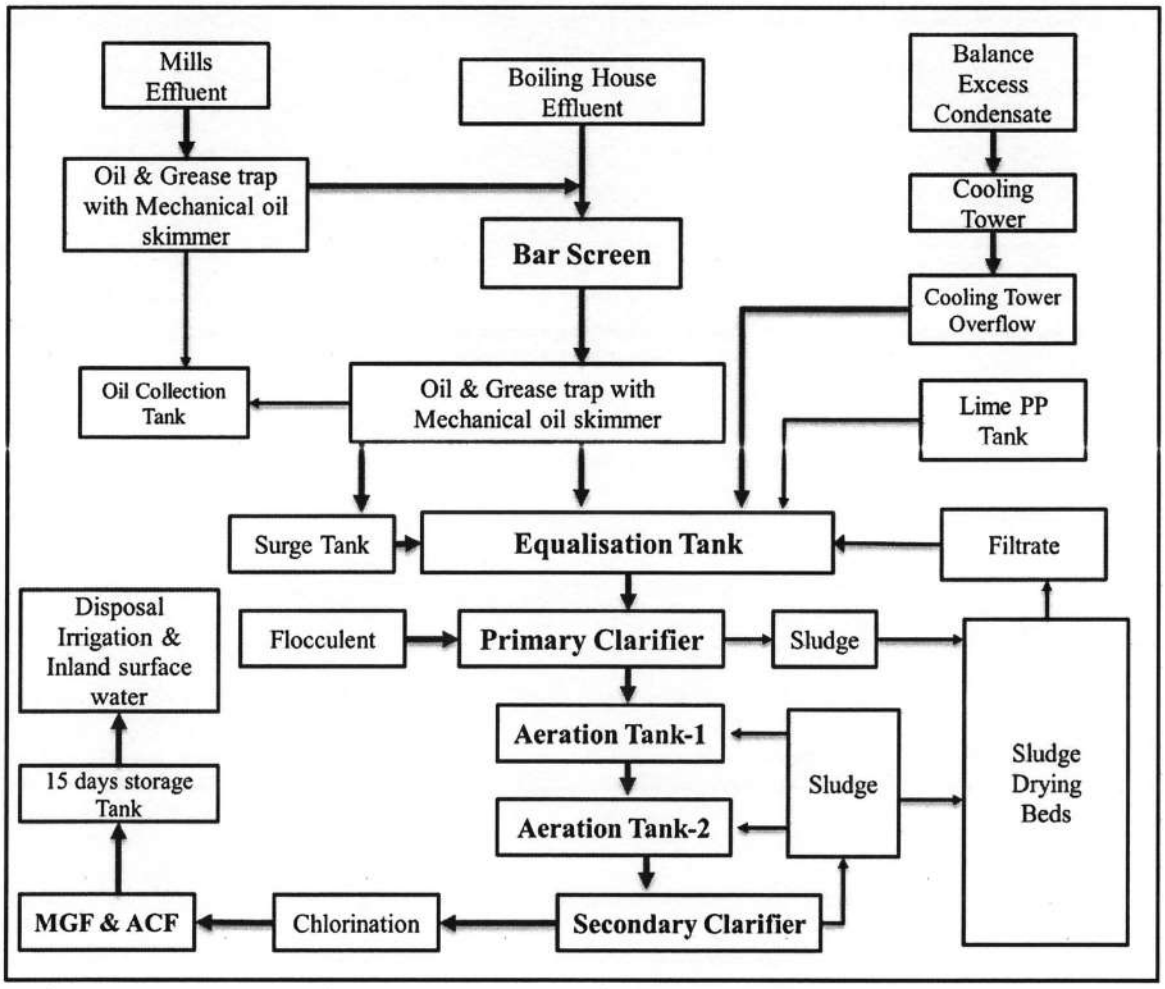


Figure 7: Process flow Diagram ETP

The Details of treated water from ETP Plant for last two financial years is given below;

Table 18: ETP Plant Treated water details

Year	ETP Inlet	ETP Outlet
FY 2021-22	173118	128532
FY 2022-23	166988	119118

Monthly variations in treated water from ETP Plant for FY 2022-23 is given below in the table;

Table 19: Monthly treated water from ETP Plant for FY 2022-23

Month	ETP Inlet (KL)	ETP Outlet (KL)
Apr-22	21350	17870
May-22	28542	19670
Jun-22	0	0
Jul-22	0	0
Aug-22	0	0
Sep-22	0	0
Oct-22	0	0
Nov-22	31963	19577
Dec-22	20192	9536
Jan-23	20614	18746
Feb-23	27038	16982
Mar-23	17289	16737
Total	**166988**	**119118**

3.9.2 Sewage Treatment Plant (Capacity 80 KLD)

The unit has one sewage treatment plant of 80 KLD for treatment of domestic effluent generated from the staff quarters, worker's colony, guest houses, canteens, bathrooms, kitchen and laundry. The unit has consent to operate, issued (dated 28.01.2022) by UPPCB, having permission to discharge 125 KLD of treated sewage through Septic Tank with prescribed standards as per E(P)A rules 1986.

Monthly treated water from STP Plant for FY 2022-23 is given below in the table;

Table 20: STP Treated water details

Month	STP Inlet (KL)	STP Outlet (KL)
Apr-22	NA	NA
May-22	NA	NA
Jun-22	NA	NA
Jul-22	NA	NA
Aug-22	NA	NA
Sep-22	NA	NA

Month	STP Inlet (KL)	STP Outlet (KL)
Oct-22	NA	NA
Nov-22	NA	NA
Dec-22	31	30
Jan-23	32	30
Feb-23	28	25
Mar-23	33	28
Total	**124**	**113**

5. WATER CONSERVATION MEASURES

5.1 Reducing RO water Reject

For meeting the requirement of De-mineralized (DM) water at the Boiler for boiler feed water, the plant is equipped with a DM water plant within the premises. The DM water plant is consists of different filter sections which are Pressure sand filter (PSF), Reverse osmosis (RO) filter, Degasser, DM Plant etc.

The Reverse osmosis (RO) system within the DM water plant is two stage RO system designed for a capacity of 45 m^3/hr. RO water flow. The RO feed pump is designed for water flow of 64M3/Hr and designed head of 149 M. The RO water from RO system is fed into the degasser tank. The water from degasser tank is pumped into the DM plant by the degasser water pump. The water from DM plant is stored in two numbers of DM water tank having capacity of 750M3 each and is pumped to Boiler 1, 2 & 3 feed water tank and Boiler – 4 feed water tank as and when required. The figure below represents the schematic of DM water plant.

During the field study, it was observed that around 25% of Water is rejected from RO plant, which is on the higher side. The detail of the water processed is given in the table below;

Table 21: RO Plant Treated water details

Year	RO Inlet (KL)	RO Outlet (KL)	Reject Water (KL)
FY 2022-23	15207	11448	3759

Therefore the additional the fresh water consumption is around 3759 KL per annum. Installing a multistage RO system would reduce the reject quantity to less than 10%.Multistage RO systems also offer several other benefits such as enhanced water quality, reduced operating costs, reduced maintenance requirements and improved system reliability.

By installing a multistage RO system, fresh water consumption to the tune of 2500 KL per annum could be reduced.

It may however be noted that the steam generated in the plant passes through back pressure turbines and used for indirect heating in the process, the condensate recovery in the plant should

ideally be in excess of 90 %. Based on the plant records, the makeup water in the boilers, which is represented by the DM water consumption in the plant, indicates that the makeup requirements is less than 2%.

5.2 Installing Condensate Polishing Unit for Second Condensate

The plant generates about 200 Tonnes/hr. of second condensate i.e. the condensate from the second to the fifth evaporator. This condensate is sent to the hot water tank, above 120 m3/hr. is used for inhibition process and balance is sent to the spray pond for cooling. The cold water from spray pond is used as makeup water in the UGR and surplus water sent to ETP.

The second condensate is usually high in impurities, such as organic and inorganic contaminants, as well as dissolved solids which can cause scaling and fouling in the plant equipment, reducing the efficiency of the process and increasing maintenance requirements. As the quantity of second condensate, which is essentially water content in sugarcane, is high and of reasonable quality, the same should be put to maximum use to minimize fresh water consumption.

In order to make the second condensate suitable for other process requirement, it is suggested to install a condensate polishing unit (CPU). The typical analysis of second condensate is given in the table below;

Table 22: Analysis of Second Condensate

Sr No.	Parameters	Value
1	PH	7.3
2	Temperature	38
3	COD	456
4	BOD	64.3
5	SS	<5
6	TDS	112
7	Ca	14
8	Mg	<1
9	Fe	4.2
10	Mn	<0.02
11	SO4	<1
12	CL	<1
13	SIO2	28.4
14	Flow (Average)	200

Condensate polishing unit removes impurities from the condensate accumulated during the evaporation process. A condensate polishing unit for the second condensate typically consists of a series of treatment processes, including filtration, ion exchange, and activated carbon adsorption. The treatment processes are designed to remove impurities such as silica and TDS from the second condensate, producing a high-quality condensate that can be reused in the sugar manufacturing process.

The filtration process typically involves using a combination of sand and activated carbon filters to remove suspended solids and organic contaminants from the second condensate. The ion exchange process involves passing the filtered condensate through an ion exchange resin bed to remove dissolved minerals and other impurities. The activated carbon adsorption process involves using activated carbon to remove any remaining organic contaminants and improve the odor and taste of the treated condensate.

The typical layout diagram for a condensate polishing unit (CPU) is depicted in the figure below;

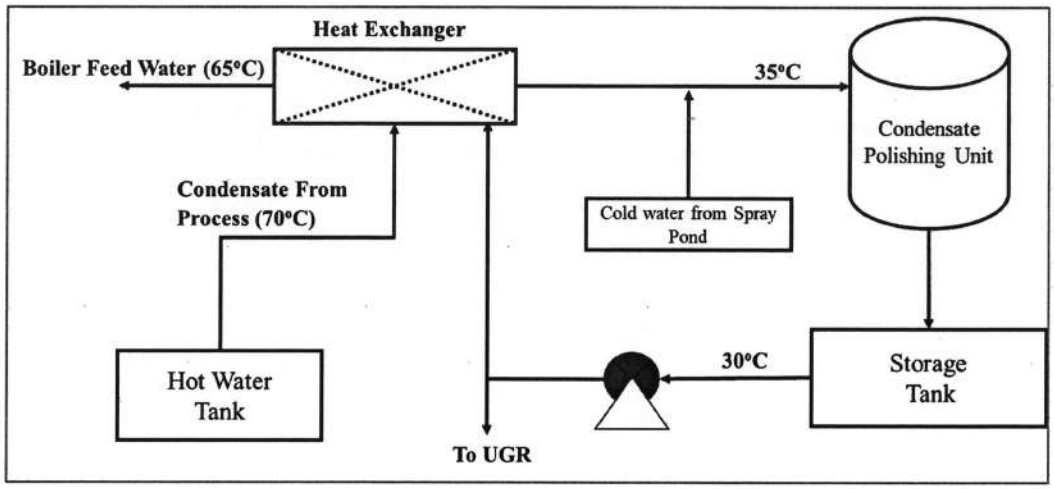


Figure 8: Condensate Polishing Unit

Installing a condensate polishing unit (CPU) and using the polished water for producing DM water would totally eliminate in the RO plant besides improving the effectiveness of RO plant. ***The fresh water saving potential due to this would be about 15,100 KL per annum.***

It is therefore advisable to evaluate the feasibility of installing a condensate polishing unit before considering the installation of multistage RO plant. Installation of CPU could avoid the need for replacing the existing RO plant.

5.3 Installing Sulphate Separation unit

Presence of sulphate ions in the sugar juice can cause scaling and fouling in the sugar manufacturing equipment, reducing the efficiency of the process and increasing maintenance requirements. Additionally, sulphate ions can react with calcium ions in the sugar juice, resulting in the formation of calcium sulfate, which can further contribute to scaling and fouling. Calcium sulfate is a relatively insoluble compound that can deposit on the surfaces of the sugar manufacturing equipment, reducing the heat transfer efficiency and increasing the risk of equipment failure.

Further the sulphate in the juice finds its way into the Effluent treatment plant (ETP). The effectiveness of ETP is also affected due to the presence of sulphates. The typical analysis of ETP water is presented in the table below;

Table 23: Typical analysis of ETP water

Sr No.	Parameters	ETP Raw Waste Water	Effluent of Secondary clarifier
1	PH	4.4	7.5
2	Temperature	33	28
3	COD	2480	80.9
4	BOD	544.3	20.4
5	SS	456.9	16.2
6	TDS	2146	1212
7	Ca	212.1	82
8	Mg	24	4.7
9	Fe	184.5	54.3
10	Mn	28.2	<0.02
11	SO4	400	80.2
12	CL	342.7	15.6
13	SIO2	328.6	78.3

To overcome this issue, it is suggested to install sulphate separation unit to remove sulfate ions from the sugar juice thereby preventing the formation of calcium sulfate and other insoluble precipitates. The unit typically involves a precipitation process, where a reagent is added to the sugar juice to convert the sulfate ions into an insoluble precipitate, which can then be removed from the juice. The most common reagent used in sulfate separation is calcium hydroxide (lime),

which reacts with the sulfate ions to form calcium sulfate (gypsum), which can be easily removed from the sugar juice. Additionally, the sulfate separation unit can help produce high-quality sugar products, free from unwanted impurities and contaminants.

The sulfate separation unit typically consists of a reaction tank, where the lime is added to the sugar juice, and a settling tank, where the calcium sulfate precipitate is allowed to settle out of the juice. The settled precipitate is then removed from the settling tank and disposed off. The plant is already contemplating installing a Sulphate Separation Plant (SSP) which would enable them to use ETP treated water for gardening and other horticultural activities.

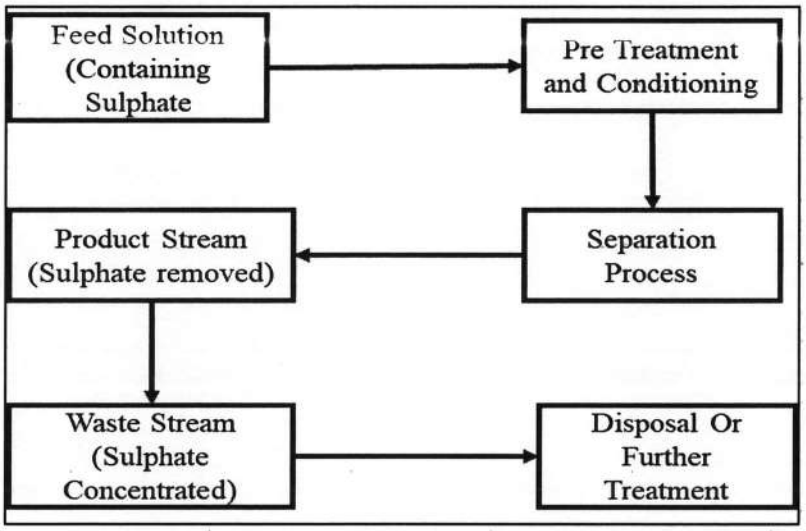


Figure 9: Layout of Sulphate Separation unit

5.4 Adopting Zero liquid Discharge

As a responsible and conscious organization, IPL should consider adopting zero liquid discharge (ZLD) as a social obligation. Implementing ZLD demonstrates a commitment to sustainable practices and corporate social responsibility, which can enhance the reputation and credibility of businesses, especially in environmentally conscious industries. Besides, regulatory compliance would soon necessitate the need for adopting ZLD to promote waste water treatment and reuse.

Adopting a ZLD system can offer several benefits, including water conservation, environmental compliance, reduced operating costs, improved product quality, and improved brand reputation.

However, the implementation of a ZLD system requires careful planning and design to ensure optimal performance and compliance with environmental regulations.

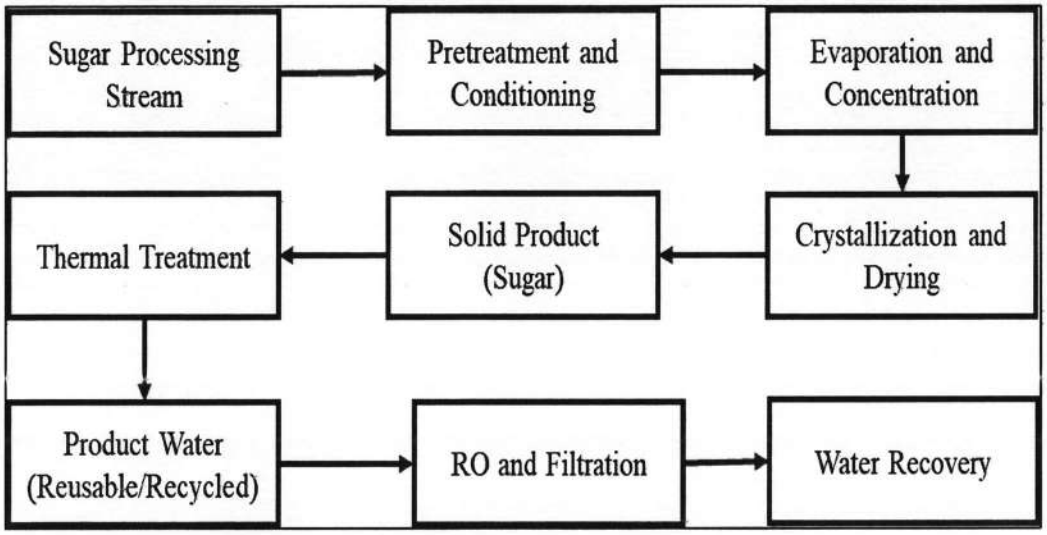


Figure 10: Layout of Zero liquid Discharge (ZLD)

5.5 Other General Recommendations

To further reduce the fresh water consumption and waste water generation in the plant, it would be desirable to adopt the following measures;.

- Construction of small pits with smooth cleaned inner surface preferably with ceramic tiles may be carried out 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. Similar arrangement may be provided at other places also. Reclamation of gland cooling water and other cooling water may be ensured and make up may be made from cold surplus condensate.
- Good housekeeping must be ensured by preventing spillages, leakages and overflows etc. which otherwise increases the load of pollutants in the waste waters coming out of the plant.

- Condensate recovery should be ensured from all steam traps/vapour/steam line drains.
- Dry cleaning of plant floors etc. should be practiced instead of wet cleaning using water as also encouraged by CPCB.

- Plant is having wet scrubbers for arresting fly ash and suspended particulate matters. It has been observed that recovery of water from wet sludge remains poor which is attributed mainly to insufficient sludge drying and water recovery area. This results into increase in effluent generation and has also increased make up water. It is recommended to provide proper sludge drying facility with effective collection of water from sludge with effective recycling to minimize effluent generation and make up water requirement.

6. Way forward - New technologies

The sugar industry can benefit from various advanced technologies to enhance efficiency, productivity, and sustainability. Some of the advanced technologies that could be considered, which may not have a direct bearing on the operations of the plant but could indirectly impact its performance are discussed here under;

1. **Automation and Control Systems:** Implementing advanced automation and control systems to enable precise monitoring and control of the sugar production process. This includes automation of milling, crystallization, drying, and packaging operations, resulting in improved process efficiency and quality control.
2. **Advanced Cane Harvesting Systems:** Mechanized cane harvesting systems, such as whole-stalk harvesters, can improve efficiency and reduce labor requirements. These systems efficiently harvest the sugarcane crop, minimize losses, and enhance overall productivity.
3. **Precision Agriculture:** Precision agriculture technologies, including remote sensing, GPS, and data analytics, can optimize sugarcane cultivation practices. This includes precise fertilizer application, irrigation management, and yield monitoring, leading to increased crop productivity and resource efficiency.

Implementing these advanced technologies requires careful assessment of the specific needs, resources and economic viability for each sugar mill. However, they can significantly contribute to increased efficiency, sustainability and competitiveness in the sugar industry. The farmers involved in the cultivation of sugar cane would also benefit from the adoption of such technologies.

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Annexure

Annexure I: Water consumption (Fresh & Hot) & DM Plant and ETP Details

Annexure II: Water withdrawal NOCs Details

Annexure III: Latest test reports ETP, Condensate water & Waste water

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Annexure I

Monthly total Water Consumption for FY 2021-22

Month	Process	Boiler	Domestic
Apr-21	23	2181	10178
May-21	22	1814	6401
Jun-21	24	0	5626
Jul-21	23	0	4529
Aug-21	24	0	3153
Sep-21	25	0	118
Oct-21	21	0	195
Nov-21	22	1651	2950
Dec-21	24	2786	3141
Jan-22	25	2440	3305
Feb-22	24	2166	1456
Mar-22	28	2351	2055
Total	**285**	**15389**	**43107**

Monthly total Water Consumption for FY 2021-22

Month	Process	Boiler	Domestic
Apr-20	24	2145	8840
May-20	24	2300	11150
Jun-20	24	0	0
Jul-20	26	0	0
Aug-20	23	0	0
Sep-20	22	0	0
Oct-20	21	0	0
Nov-20	22	2105	8337
Dec-20	20	2310	9580
Jan-21	22	2401	7845
Feb-21	23	2350	6800
Mar-21	26	2140	1674
Total	**277**	**15751**	**54226**

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Hot Water consumption in season 2021-22 for unit-I

Unit-I Hot Water consumption in MT		
Particular Unit-1	**Per Day Total**	**Total water consumption in season 2021-22**
Molasess Conditioner Water Flow	6	1150
Milk of Lime Flow	64	12499
A Batch Pan Water Flow	60	11630
B&C Centrifugal Machine Flow	50	9626
A&B&C Batch Pan Water Flow	109	21189
B&C Sugar Melter Flow	0	0
FFE Hot Water Flow	15	2914
Vacuum Filter Water Flow	354	68721
B&C Centrifugal Machine	135	26277
A Centrifugal Total Consumption	172	33393
Imbibition-01 Water Flow	2601	504557
Total	**3566**	**691956**

Hot Water consumption in season 2021-22 for unit-II

Unit-II Hot Water consumption in MT		
Particular Unit-II	**Per Day Total**	**Hot Water Consumption in Season-2021-22**
B&C Sugar Melter and Molasses Flow	121	23468
B&C Pan Water Flow	18	3570
A Batch Pan Water Flow	30	5872
B&C Megma Mix And Centrifugal Machine	68	13149
Vacuum Filter Water Flow	4	702
A Centrifugal Machine Total Consumption	352	68340
FFE Water Flow	16	3116
Imbibition-1 Flow	1522	295237
Total	2131	413454

Monthly treated water from WTP Plant for FY 2021-22 is given below in the table;

Month	RO Inlet	RO Outlet
Apr-21	2310	1412
May-21	2210	1430
Jun-21	0	0
Jul-21	0	0
Aug-21	0	0
Sep-21	0	0
Oct-21	0	0
Nov-21	2170	1412
Dec-21	2400	1380
Jan-22	2350	1440
Feb-22	2410	1452
Mar-22	2450	1318
Total	**16300**	**9844**

Monthly treated water from WTP Plant for FY 2020-21 is given below in the table;

Month	RO Inlet	RO Outlet
Apr-20	2400	1470
May-20	2384	1450
Jun-20	0	0
Jul-20	0	0
Aug-20	0	0
Sep-20	0	0
Oct-20	0	1380
Nov-20	2080	1352
Dec-20	2481	1417
Jan-21	2342	1410
Feb-21	2370	1401
Mar-21	2450	1450
Total	**16507**	**11330**

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Monthly treated water from ETP Plant for FY 2021-22 is given below in the table;

Month	ETP Inlet	ETP Outlet
Apr-21	30566	16883
May-21	28170	18555
Jun-21	11070	8035
Jul-21	0	0
Aug-21	0	0
Sep-21	0	0
Oct-21	0	0
Nov-21	26542	14841
Dec-21	29470	18410
Jan-22	21670	18750
Feb-22	25630	16921
Mar-22	192380	16137
Total	**365498**	**128532**

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Annexure II

GROUND WATER DEPARTMENT
(Namami Gange & Rural Water Supply Department)
Ministry of Jal Shakti
Government of Uttar Pradesh

Annexure-IV

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Form 8 (E)

[See rules 15(2)]

(RENEWAL OF AUTHORIZATION/ NO-OBJECTION CERTIFICATE FOR SINKING OF EXISTING WELL FOR INDUSTRIAL/ COMMERCIAL/ INFRASTRUCTURAL OR BULK USER OF GROUND WATER)

AUTHORIZATION/ NO-OBJECTION CERTIFICATE NO: REG011159

VALID FROM 14/03/2020 TO 13/03/2025

Registration No.: 202108000668			
Name of the Owner	SUDHIR KUMAR		
Address of the Applicant	Indian Potash Limited Unit Titawi Sugar Complex, VPO Titawi , Muzaffarnagar ,U.P	**Application Form Serial No.**	MZFN0821RIN0049
Date of Submission	20/08/2021	**Specimen Signature**	
Company Name	INDIAN POTASH LIMITED UNIT TITAWI SUGAR COMPLEX	**Company Address**	Village & P.O. Titawi, Distt-Muzaffarnagar,
Location Particulars			
District	Muzaffar Nagar	**Block**	BAGHRA
Plot No./Khasra No.	LAND DETAILS ENCLOSED.	**Municipality/Corporation**	No
Ward No./Holding No.			LAND DETAILS ENCLOSED.
Particular of the Existing Well and Pumping Device			
Date of Construction/Sinking of the Well	12/02/1992		
Type of Well	Tube Well/Boring	**Depth of the Well (In meter)**	120.00
Purpose of well	Industrial	**Assembly Size(For Tube Well)**	
Strainer Position (For Tube Well)			
Type of Pump Used	Submersible	**H.P. of the Pump**	30.00
Operational Device	Electric Motor	**Rate of Withdrawal (m^3/hr.)**	90.00
Date of Energization (In Case of Electric Pump)		13/02/1992	
Maximum Allowable Rate of Withdrawal (m^3/hr.):	90.00	**Maximum Allowable Running Hours Per Day:**	5.00
Maximum Allowable Annual Extraction of Ground Water:			157500
Reason for renewal of N.O.C. एन.ओ.सी. के नवीनीकरण का कारण	CGWA NOCAP PORTAL HAS STOPPED PROCESSING OF ALL APPLICATIONS IN STATE OF UTTAR PRADESH AS UPGWD HAS STARTED REGULATION OF GROUND WATER		
Against Case			

This No-Objection certificate authorizes the owner applicant (user) to sink a well in the location specified at Sl. (3) for extraction of ground water at a rate not exceeding that as shown at Sl. (3j), for Running Hours per day as shown at Sl. (3k), and for maximum allowable annual extraction of ground water as shown at Sl. (3k) and is valid subject to the observance of the conditions stated overleaf.

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Conditions

- (1) In case of any change of ownership of the proposed well, fresh authorization has to be obtained.
- (2) No change of location, design, rate of withdrawal and pumping device in respect of the proposed well as indicated at SL (2) and (3) of this certificate shall be made without prior permission of the Competent Authority. Any deviation in this regard shall lead to cancellation of this authorization.
- (3) For the purpose of measuring and recording the quantity of ground water extracted, every said user shall affix digital water flow meters(conforming to BIS/ IS standards) having telemetry system in the abstraction structure, which record rate and quantum of extraction, at outlet of pumping devices and it shall be presumed that the quantity recorded by the meter has been extracted by the said user, until the contrary is proved. The rate of extraction of ground water from the well as shown in item 3(k) shall not exceed to the recorded rate from water meters
- (4) The concerned Authority reserves the right to stop extraction of ground water from the well due to quality hazards or any other reasons, if the situation so demands.
- (5) In case of any change of ownership of the existing well, fresh registration has to be obtained.
- (6) No change of location, design, rate of withdrawal and pumping device in respect of the existing well as indicated at Sl. (2) and (3) of this certificate shall be made without prior permission of the Competent Authority. Any deviation in this regard shall lead to cancellation of this registration.
- (7) n case, any of the particulars I information furnished by the applicant in his application for issuance of this registration is found to be incorrect during verification at any subsequent stage, this registration is liable for cancellation.
- (8) The Certificate of Authorization/ NOC shall be valid for a period of five years from the date of issue. The applicant shall have to apply for renewal through a fresh application, at least ninety days prior to expiry of its validity.
- (9) Construction of piezometers and installation of digital water level recorders with telemetry shall be mandatory for user. Depth and zone tapped of piezometer should be commensurate with that of the pumping well. The data, obtained from digital water level recorders shall be made available to this office on monthly basis.
- (10) Guidelines for Installation of Piezometers and their Monitoring
- Piezometer is a borewell /tube well used only for measuring the water level by lowering the tape/ sounder or automatic water level measuring equipment. It is also used to take water sample for water quality testing whenever needed. General guidelines for installation of piezometers are as follows for compliance of NOC:
- • The piezometer is to be installed/constructed at the minimum of 50 m distance from the pumping well through which ground water is being withdrawn. The diameter of the piezometer should be about 4" to 6".
- • The depth of the piezometer should be same as is case of the pumping well from which ground water is being abstracted. If, more than one piezometer are installed the second piezometer should monitor the shallow ground water regime. It will facilitate shallow as well as deeper ground water aquifer monitoring.
- • No. of piezometers to be constructed & Type of water level monitoring mechanism shall be as per below table:

S.No	Quantum of Ground water withdrawal (cum/day)	No.of piezometers required	Monitiring Mechanism	
			Manual	DWLR with Telemetry
1	< 10	0	0	0
2	11 - 50	1	1	0
3	50- 500	1	0	1
4	> 500	2	0	2

- • The measuring frequency should be monthly and accuracy of measurement should be up to cm. the reported measurement should be given in meter up to two decimals.
- • For measurement of water level sounder or automatic water level recorder (AWLR)/ Digital Automatic water level recorder (DWLR) with telemetry system should be used for accuracy.
- • The measurement of water level in piezometer should be taken, only after the pumping from the surrounding tube wells has been stopped for about four to six hours.
- • All the details regarding coordinates, reduced level (with respect to mean level), depth, zone taped and assembly lowered should be provided for bringing the piezometer into the Hydrograph Monitoring System for Ground Water Department, Uttar Pradesh, and for its validation.
- • The ground water quality has to be monitored twice in a year during pre-monsoon (May/June) and post-monsoon (October/November) periods. Quality may be got analyzed from NABL approved lab. Besides, one sample (1 lt. capacity bottle) to the concerned Director, Ground Water Department, Uttar Pradesh, for chemical analysis.
- • A Permanent display board should be installed at piezometer/Tube wells site for providing the location, piezometer/ tube well number, depth and zone tapped of piezometer/tube well for standard referencing and identification.
- • Any other site-specific requirement regarding safety and access for measurement may be taken care of.
- (11) Any other condition(s) that may be imposed by the concerned Authority.
- (12) In case, any of the particulars I information furnished by the applicant in his application for issuance of this permit is found to be incorrect during verification at any subsequent stage, this permit is liable for cancellation.
- **SPECIFIC CONDITIONS:**
- (A) **For Industrial User:** No Objection Certificate for ground water extraction by industries shall be granted subject to the following specific conditions:
- i) No Objection Certificate shall be granted only in such cases where local government water supply agencies are not able to supply the desired quantity of water.
- ii) All industries shall be required to adopt latest water efficient technologies so as to reduce dependence on ground water resources.
- iii) All industries abstracting ground water in excess of 100 m^3/d shall be required to undertake annual water audit through Confederation of Indian Industries (CII)/ Federation Indian Chamber of Commerce and Industry (FICCI)/ National Productivity Council (NPC) certified auditors and submit audit reports within three months of completion of the same to Ground Water Department, Uttar Pradesh. All such industries shall be required to reduce their ground water use by at least 20% over the next five years through appropriate means.
- iv) Construction of observation well(s) (piezometer)(s) within the premises and installation of appropriate water level monitoring mechanism as mentioned in General Condition no.10 shall be mandatory for industries drawing/ proposing to draw more than 10 m^3/day of ground water and. Monitoring of water level shall be done by the project proponent. The piezometer (observation well) shall be constructed at a minimum distance of 50 m from the bore well/production well. Depth and aquifer zone tapped in the piezometer shall be the same as that of the pumping well/ wells. Monthly water level data shall be submitted online to the Ground Water Department, UP.
- v) The proponent shall be required to adopt roof top rain water harvesting/ recharge in the project premises. Industries which are likely to pollute ground water (chemical, pharmaceutical, dyes, pigments, paints, textiles, tannery, pesticides/ insecticides, fertilizers, slaughter house, explosives etc.) shall store the harvested rain water in surface storage tanks for use in the industry.
- vi) Injection of treated/ untreated waste water into aquifer system is strictly prohibited.
- vii) Industries which are likely to cause ground water pollution e.g. Tanning, Slaughter Houses, Dye, Chemical/ Petrochemical, Coal washeries, other hazardous units etc. (as per CPCB list) need to undertake necessary well head protection measures to ensure prevention of ground water pollution.
- (B) **Infrastructural User:** The No Objection Certificate for ground water abstraction will be granted subject to the following specific conditions:
- i) In case of infrastructure projects that require dewatering, proponent shall be required to carry out regular monitoring of dewatering discharge rate (using a digital water flow meter) and submit the data online to Ground Water Department, UP as applicable. Monitoring records and results should be retained by the proponent for two years, for inspection or reporting as required by District Ground Water Management Council.
- ii) Installation of Sewage Treatment Plants (STP) shall be mandatory for new projects, where ground water requirement is more than 20 m^3 /day. The water from STP shall be utilized for toilet flushing, car washing, gardening etc.

Date :**11/11/2021**
Place:**Muzaffar Nagar**

This certificate is electronically generated and does not require digital signature

GROUND WATER DEPARTMENT
(Namami Gange & Rural Water Supply Department)
Ministry of Jal Shakti
Government of Uttar Pradesh

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Form 8 (E)

[See rules 15(2)]

(RENEWAL OF AUTHORIZATION/ NO-OBJECTION CERTIFICATE FOR SINKING OF EXISTING WELL FOR INDUSTRIAL/ COMMERCIAL/ INFRASTRUCTURAL OR BULK USER OF GROUND WATER)

AUTHORIZATION/ NO-OBJECTION CERTIFICATE NO: REG018075

VALID FROM 14/03/2020 TO 13/03/2025

Registration No.: 202106000583

Name of the Owner	SUDHIR KUMAR		
Address of the Applicant	Indian Potash Limited Unit Titawi Sugar Complex, VPO Titawi , Muzaffarnagar ,U.P	**Application Form Serial No.**	MZFN0821RIN0048
Date of Submission	26/06/2021	**Specimen Signature**	
Company Name	INDIAN POTASH LIMITED UNIT TITAWI SUGAR COMPLEX	**Company Address**	Village & P.O. Titawi, Distt-Muzaffarnagar

Location Particulars

District	Muzaffar Nagar	**Block**	BAGHRA
Plot No./Khasra No.	LAND DETAILS ENCLOSED.	**Municipality/Corporation**	No
Ward No./Holding No.			LAND DETAILS ENCLOSED.

Particular of the Existing Well and Pumping Device

Date of Construction/Sinking of the Well	01/12/2006		
Type of Well	Tube Well/Boring	**Depth of the Well (In meter)**	150.00
Purpose of well	Industrial	**Assembly Size(For Tube Well)**	
Strainer Position (For Tube Well)			
Type of Pump Used	Submersible	**H.P. of the Pump**	30.00
Operational Device	Electric Motor	**Rate of Withdrawal (m^3/hr.)**	100.00
Date of Energization (In Case of Electric Pump)		01/12/2006	
Maximum Allowable Rate of Withdrawal (m^3/hr.):	100.00	**Maximum Allowable Running Hours Per Day:**	4.00
Maximum Allowable Annual Extraction of Ground Water:			140000
Reason for renewal of N.O.C. एन.ओ.सी. के नवीनीकरण का कारण	CGWA NOCAP PORTAL HAS STOPPED PROCESSING OF ALL APPLICATIONS IN STATE OF UTTAR PRADESH AS UPGWD HAS STARTED REGULATION OF GROUND WATER.		
Against Case			

This No-Objection certificate authorizes the owner applicant (user) to sink a well in the location specified at Sl. (3) for extraction of ground water at a rate not exceeding that as shown at Sl. (3j), for Running Hours per day as shown at Sl. (3k), and for maximum allowable annual extraction of ground water as shown at Sl. (3k) and is valid subject to the observance of the conditions stated overleaf.

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Conditions

- (1) In case of any change of ownership of the proposed well, fresh authorization has to be obtained.
- (2) No change of location, design, rate of withdrawal and pumping device in respect of the proposed well as indicated at SL (2) and (3) of this certificate shall be made without prior permission of the Competent Authority. Any deviation in this regard shall lead to cancellation of this authorization.
- (3) For the purpose of measuring and recording the quantity of ground water extracted, every said user shall affix digital water flow meters(conforming to BIS/ IS standards) having telemetry system in the abstraction structure, which record rate and quantum of extraction, at outlet of pumping devices and it shall be presumed that the quantity recorded by the meter has been extracted by the said user, until the contrary is proved. The rate of extraction of ground water from the well as shown in item 3(k) shall not exceed to the recorded rate from water meters
- (4) The concerned Authority reserves the right to stop extraction of ground water from the well due to quality hazards or any other reasons, if the situation so demands.
- (5) In case of any change of ownership of the existing well, fresh registration has to be obtained.
- (6) No change of location, design, rate of withdrawal and pumping device in respect of the existing well as indicated at Sl. (2) and (3) of this certificate shall be made without prior permission of the Competent Authority. Any deviation in this regard shall lead to cancellation of this registration.
- (7) n case, any of the particulars I information furnished by the applicant in his application for issuance of this registration is found to be incorrect during verification at any subsequent stage, this registration is liable for cancellation.
- (8) The Certificate of Authorization/ NOC shall be valid for a period of five years from the date of issue. The applicant shall have to apply for renewal through a fresh application, at least ninety days prior to expiry of its validity.
- (9) Construction of piezometers and installation of digital water level recorders with telemetry shall be mandatory for user. Depth and zone tapped of piezometer should be commensurate with that of the pumping well. The data, obtained from digital water level recorders shall be made available to this office on monthly basis.
- (10) Guidelines for Installation of Piezometers and their Monitoring
- Piezometer is a borewell /tube well used only for measuring the water level by lowering the tape/ sounder or automatic water level measuring equipment. It is also used to take water sample for water quality testing whenever needed. General guidelines for installation of piezometers are as follows for compliance of NOC:
- • The piezometer is to be installed/constructed at the minimum of 50 m distance from the pumping well through which ground water is being withdrawn. The diameter of the piezometer should be about 4" to 6".
- • The depth of the piezometer should be same as is case of the pumping well from which ground water is being abstracted. If, more than one piezometer are installed the second piezometer should monitor the shallow ground water regime. It will facilitate shallow as well as deeper ground water aquifer monitoring.
- • No. of piezometers to be constructed & Type of water level monitoring mechanism shall be as per below table:

S.No	Quantum of Ground water withdrawal (cum/day)	No.of piezometers required	Monitiring Mechanism	
			Manual	DWLR with Telemetry
1	< 10	0	0	0
2	11 - 50	1	1	0
3	50- 500	1	0	1
4	> 500	2	0	2

- • The measuring frequency should be monthly and accuracy of measurement should be up to cm. the reported measurement should be given in meter up to two decimals.
- • For measurement of water level sounder or automatic water level recorder (AWLR)/ Digital Automatic water level recorder (DWLR) with telemetry system should be used for accuracy.
- • The measurement of water level in piezometer should be taken, only after the pumping from the surrounding tube wells has been stopped for about four to six hours.
- • All the details regarding coordinates, reduced level (with respect to mean level), depth, zone taped and assembly lowered should be provided for bringing the piezometer into the Hydrograph Monitoring System for Ground Water Department, Uttar Pradesh, and for its validation.
- • The ground water quality has to be monitored twice in a year during pre-monsoon (May/June) and post-monsoon (October/November) periods. Quality may be got analyzed from NABL approved lab. Besides, one sample (1 lt. capacity bottle) to the concerned Director, Ground Water Department, Uttar Pradesh, for chemical analysis.
- • A Permanent display board should be installed at piezometer/Tube wells site for providing the location, piezometer/ tube well number, depth and zone tapped of piezometer/tube well for standard referencing and identification.
- • Any other site-specific requirement regarding safety and access for measurement may be taken care of.
- (11) Any other condition(s) that may be imposed by the concerned Authority.
- (12) In case, any of the particulars I information furnished by the applicant in his application for issuance of this permit is found to be incorrect during verification at any subsequent stage, this permit is liable for cancellation.
- **SPECIFIC CONDITIONS:**
- (A) **For Industrial User:** No Objection Certificate for ground water extraction by industries shall be granted subject to the following specific conditions:
- i) No Objection Certificate shall be granted only in such cases where local government water supply agencies are not able to supply the desired quantity of water.
- ii) All industries shall be required to adopt latest water efficient technologies so as to reduce dependence on ground water resources.
- iii) All industries abstracting ground water in excess of 100 m^3/d shall be required to undertake annual water audit through Confederation of Indian Industries (CII)/ Federation Indian Chamber of Commerce and Industry (FICCI)/ National Productivity Council (NPC) certified auditors and submit audit reports within three months of completion of the same to Ground Water Department, Uttar Pradesh. All such industries shall be required to reduce their ground water use by at least 20% over the next five years through appropriate means.
- iv) Construction of observation well(s) (piezometer)(s) within the premises and installation of appropriate water level monitoring mechanism as mentioned in General Condition no.10 shall be mandatory for industries drawing/ proposing to draw more than 10 m^3/day of ground water and. Monitoring of water level shall be done by the project proponent. The piezometer (observation well) shall be constructed at a minimum distance of 50 m from the bore well/production well. Depth and aquifer zone tapped in the piezometer shall be the same as that of the pumping well/ wells. Monthly water level data shall be submitted online to the Ground Water Department, UP.
- v) The proponent shall be required to adopt roof top rain water harvesting/ recharge in the project premises. Industries which are likely to pollute ground water (chemical, pharmaceutical, dyes, pigments, paints, textiles, tannery, pesticides/ insecticides, fertilizers, slaughter house, explosives etc.) shall store the harvested rain water in surface storage tanks for use in the industry.
- vi) Injection of treated/ untreated waste water into aquifer system is strictly prohibited.
- vii) Industries which are likely to cause ground water pollution e.g. Tanning, Slaughter Houses, Dye, Chemical/ Petrochemical, Coal washeries, other hazardous units etc. (as per CPCB list) need to undertake necessary well head protection measures to ensure prevention of ground water pollution.
- (B) **Infrastructural User:** The No Objection Certificate for ground water abstraction will be granted subject to the following specific conditions:
- i) In case of infrastructure projects that require dewatering, proponent shall be required to carry out regular monitoring of dewatering discharge rate (using a digital water flow meter) and submit the data online to Ground Water Department, UP as applicable. Monitoring records and results should be retained by the proponent for two years, for inspection or reporting as required by District Ground Water Management Council.
- ii) Installation of Sewage Treatment Plants (STP) shall be mandatory for new projects, where ground water requirement is more than 20 m^3 /day. The water from STP shall be utilized for toilet flushing, car washing, gardening etc.

Date :**11/11/2021**
Place:**Muzaffar Nagar**

This certificate is electronically generated and does not require digital signature

GROUND WATER DEPARTMENT
(Namami Gange & Rural Water Supply Department)
Ministry of Jal Shakti
Government of Uttar Pradesh

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Form 8 (E)

[See rules 15(2)]

(RENEWAL OF AUTHORIZATION/ NO-OBJECTION CERTIFICATE FOR SINKING OF EXISTING WELL FOR INDUSTRIAL/ COMMERCIAL/ INFRASTRUCTURAL OR BULK USER OF GROUND WATER)

AUTHORIZATION/ NO-OBJECTION CERTIFICATE NO: REG012285

VALID FROM 14/03/2020 TO 13/03/2025

Registration No.: 202106000585

Name of the Owner	SUDHIR KUMAR		
Address of the Applicant	Indian Potash Limited Unit Titawi Sugar Complex, VPO Titawi , Muzaffarnagar ,U.P	**Application Form Serial No.**	MZFN0821RIN0050
Date of Submission	26/06/2021	**Specimen Signature**	
Company Name	INDIAN POTASH LIMITED UNIT TITAWI SUGAR COMPLEX	**Company Address**	Village & P.O. Titawi, Distt-Muzaffarnagar

Location Particulars

District	Muzaffar Nagar	**Block**	BAGHRA
Plot No./Khasra No.	LAND DETAILS ENCLOSED.	**Municipality/Corporation**	No
Ward No./Holding No.			LAND DETAILS ENCLOSED.

Particular of the Existing Well and Pumping Device

Date of Construction/Sinking of the Well	01/11/1993		
Type of Well	Tube Well/Boring	**Depth of the Well (In meter)**	110.00
Purpose of well	Industrial	**Assembly Size(For Tube Well)**	
Strainer Position (For Tube Well)			
Type of Pump Used	Submersible	**H.P. of the Pump**	30.00
Operational Device	Electric Motor	**Rate of Withdrawal (m^3/hr.)**	125.00
Date of Energization (In Case of Electric Pump)		01/11/1993	
Maximum Allowable Rate of Withdrawal (m^3/hr.):	125.00	**Maximum Allowable Running Hours Per Day:**	1.00
Maximum Allowable Annual Extraction of Ground Water:			45625
Reason for renewal of N.O.C. एन.ओ.सी. के नवीनीकरण का कारण	CGWA NOCAP PORTAL HAS STOPPED PROCESSING OF ALL APPLICATIONS IN STATE OF UTTAR PRADESH AS UPGWD HAS STARTED REGULATION OF GROUND WATER.		
Against Case			

This No-Objection certificate authorizes the owner applicant (user) to sink a well in the location specified at Sl. (3) for extraction of ground water at a rate not exceeding that as shown at Sl. (3j), for Running Hours per day as shown at Sl. (3k), and for maximum allowable annual extraction of ground water as shown at Sl. (3k) and is valid subject to the observance of the conditions stated overleaf.

Conditions

- (1) In case of any change of ownership of the proposed well, fresh authorization has to be obtained.
- (2) No change of location, design, rate of withdrawal and pumping device in respect of the proposed well as indicated at SL (2) and (3) of this certificate shall be made without prior permission of the Competent Authority. Any deviation in this regard shall lead to cancellation of this authorization.
- (3) For the purpose of measuring and recording the quantity of ground water extracted, every said user shall affix digital water flow meters(conforming to BIS/ IS standards) having telemetry system in the abstraction structure, which record rate and quantum of extraction, at outlet of pumping devices and it shall be presumed that the quantity recorded by the meter has been extracted by the said user, until the contrary is proved. The rate of extraction of ground water from the well as shown in item 3(k) shall not exceed to the recorded rate from water meters
- (4) The concerned Authority reserves the right to stop extraction of ground water from the well due to quality hazards or any other reasons, if the situation so demands.
- (5) In case of any change of ownership of the existing well, fresh registration has to be obtained.
- (6) No change of location, design, rate of withdrawal and pumping device in respect of the existing well as indicated at Sl. (2) and (3) of this certificate shall be made without prior permission of the Competent Authority. Any deviation in this regard shall lead to cancellation of this registration.
- (7) n case, any of the particulars I information furnished by the applicant in his application for issuance of this registration is found to be incorrect during verification at any subsequent stage, this registration is liable for cancellation.
- (8) The Certificate of Authorization/ NOC shall be valid for a period of five years from the date of issue. The applicant shall have to apply for renewal through a fresh application, at least ninety days prior to expiry of its validity.
- (9) Construction of piezometers and installation of digital water level recorders with telemetry shall be mandatory for user. Depth and zone tapped of piezometer should be commensurate with that of the pumping well. The data, obtained from digital water level recorders shall be made available to this office on monthly basis.
- (10) Guidelines for Installation of Piezometers and their Monitoring
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- • The piezometer is to be installed/constructed at the minimum of 50 m distance from the pumping well through which ground water is being withdrawn. The diameter of the piezometer should be about 4" to 6".
- • The depth of the piezometer should be same as is case of the pumping well from which ground water is being abstracted. If, more than one piezometer are installed the second piezometer should monitor the shallow ground water regime. It will facilitate shallow as well as deeper ground water aquifer monitoring.
- • No. of piezometers to be constructed & Type of water level monitoring mechanism shall be as per below table:

S.No	Quantum of Ground water withdrawal (cum/day)	No.of piezometers required	Monitiring Mechanism	
			Manual	DWLR with Telemetry
1	< 10	0	0	0
2	11 - 50	1	1	0
3	50- 500	1	0	1
4	> 500	2	0	2

- • The measuring frequency should be monthly and accuracy of measurement should be up to cm. the reported measurement should be given in meter up to two decimals.
- • For measurement of water level sounder or automatic water level recorder (AWLR)/ Digital Automatic water level recorder (DWLR) with telemetry system should be used for accuracy.
- • The measurement of water level in piezometer should be taken, only after the pumping from the surrounding tube wells has been stopped for about four to six hours.
- • All the details regarding coordinates, reduced level (with respect to mean level), depth, zone taped and assembly lowered should be provided for bringing the piezometer into the Hydrograph Monitoring System for Ground Water Department, Uttar Pradesh, and for its validation.
- • The ground water quality has to be monitored twice in a year during pre-monsoon (May/June) and post-monsoon (October/November) periods. Quality may be got analyzed from NABL approved lab. Besides, one sample (1 lt. capacity bottle) to the concerned Director, Ground Water Department, Uttar Pradesh, for chemical analysis.
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- **SPECIFIC CONDITIONS:**
- (A) **For Industrial User:** No Objection Certificate for ground water extraction by industries shall be granted subject to the following specific conditions:
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- ii) All industries shall be required to adopt latest water efficient technologies so as to reduce dependence on ground water resources.
- iii) All industries abstracting ground water in excess of 100 m^3/d shall be required to undertake annual water audit through Confederation of Indian Industries (CII)/ Federation Indian Chamber of Commerce and Industry (FICCI)/ National Productivity Council (NPC) certified auditors and submit audit reports within three months of completion of the same to Ground Water Department, Uttar Pradesh. All such industries shall be required to reduce their ground water use by at least 20% over the next five years through appropriate means.
- iv) Construction of observation well(s) (piezometer)(s) within the premises and installation of appropriate water level monitoring mechanism as mentioned in General Condition no.10 shall be mandatory for industries drawing/ proposing to draw more than 10 m^3/day of ground water and. Monitoring of water level shall be done by the project proponent. The piezometer (observation well) shall be constructed at a minimum distance of 50 m from the bore well/production well. Depth and aquifer zone tapped in the piezometer shall be the same as that of the pumping well/ wells. Monthly water level data shall be submitted online to the Ground Water Department, UP.
- v) The proponent shall be required to adopt roof top rain water harvesting/ recharge in the project premises. Industries which are likely to pollute ground water (chemical, pharmaceutical, dyes, pigments, paints, textiles, tannery, pesticides/ insecticides, fertilizers, slaughter house, explosives etc.) shall store the harvested rain water in surface storage tanks for use in the industry.
- vi) Injection of treated/ untreated waste water into aquifer system is strictly prohibited.
- vii) Industries which are likely to cause ground water pollution e.g. Tanning, Slaughter Houses, Dye, Chemical/ Petrochemical, Coal washeries, other hazardous units etc. (as per CPCB list) need to undertake necessary well head protection measures to ensure prevention of ground water pollution.
- (B) **Infrastructural User:** The No Objection Certificate for ground water abstraction will be granted subject to the following specific conditions:
- i) In case of infrastructure projects that require dewatering, proponent shall be required to carry out regular monitoring of dewatering discharge rate (using a digital water flow meter) and submit the data online to Ground Water Department, UP as applicable. Monitoring records and results should be retained by the proponent for two years, for inspection or reporting as required by District Ground Water Management Council.
- ii) Installation of Sewage Treatment Plants (STP) shall be mandatory for new projects, where ground water requirement is more than 20 m^3 /day. The water from STP shall be utilized for toilet flushing, car washing, gardening etc.

Date :**11/11/2021**
Place:**Muzaffar Nagar**

This certificate is electronically generated and does not require digital signature

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Annexure-III

ASIA ENVIRO LAB

(An ISO 9001:2015, 14001:2015, 45001:2018 & MOEF Approved Lab)

Job Description : Environmental Testing, ETP/STP Manufacturing, ETP/STP Plant Operation Pollution NOC Etc.

Lab - H1-837, Near Pollution Control Board, RIICO Industrial Area, Bhiwadi, Distt. Alwar (Rajasthan)-301019

Ph. No. : 01493-294022, 09694666022, Email : asiaenvirolab@gmail.com, Website : www.asiaenvirolab.com

Test Report

Report No.: AEL/TSC/23032023/WW/01	Reporting Date:28/03/2023

Issued to:	Sample I'd : AEL/TSC/230323/WW/01
M/S Titawi Sugar Complex	Date : 23.03.2023
Village + P.O. – Titavi, Muzaffarnagar-	Period of testing : 23.03.2023 to 28.03.2023
Shamli Byepass Road, Muzaffarnagar, Uttar Pradesh	

SAMPLE PARTICULARS:	
Type of the Sample	Waste Water Sample
Date of Sample Receiving	22.03.2023
Point of Sample Collection	From Cooling Tower
Sample Collected By	Customer
Purpose of Analysis	Monitoring

TEST RESULTS:

Sr. No.	Parameters	Unit	Results	Test Protocol
1	pH	--	6.50	APHA 23rd Ed. 4500 H B
2	Chemical Oxygen Demand (COD)	mg/l	780.2	APHA 23rd Ed. P-5220 B
3	Bio-Chemical Oxygen Demand (BOD) at 27° C for 3 days	mg/l	244.6	IS-3025 (P-44)
4	Total Suspended Solids	mg/l	350.0	APHA 23rd Ed. 2540 D
5	Iron (as Fe)	mg/l	154.1	APHA 23rd Ed. 3111 B
6	Manganese (as Mn)	mg/l	18.3	APHA 23rd Ed. 3500 Mn B
7	Chloride, (as Cl)	mg/l	125.7	APHA 23rd Ed.,4500 Cl B
8	Calcium (as Ca)	mg/l	712.0	APHA 23rd Ed.,3500 Ca A
9	Magnesium (as Mg)	mg/l	54.6	APHA 23rd Ed.,3500 Mg B
10	Sulphate, (as SO_4)	mg/l	1200.0	APHA 23rd Ed.,4500 SO4
11	Silica (as SiO_2)	mg/l	78.4	APHA 23rdEd. P -4500 SiO_2 D
12	Total Dissolved Solids	mg/l	2112.0	IS-3025(P-16)

Checked By

Authorized Signatory

ASIA ENVIRO LAB ★BHIWADI★

Note: 1. The result listed refer only to the tested samples and applicable parameters.
2. Sample will be destroyed one month from the date of issue of test certificate.
3. Any complaints about this report should be communicated within 7 days of issue of this report
4. The report is Not to be reproduced-wholly or in part and can Not be used as an evidence in the Court of law and should Not be used in any advertising Media without our special permission in writing.

ASIA ENVIRO LAB

(An ISO 9001:2015, 14001:2015, 45001:2018 & MOEF Approved Lab)

Job Description : Environmental Testing, ETP/STP Manufacturing, ETP/STP Plant Operation Pollution NOC Etc.

Lab - H1-837, Near Pollution Control Board, RIICO Industrial Area, Bhiwadi, Distt. Alwar (Rajasthan)-301019

Ph. No. : 01493-294022, 09694666022, Email : asiaenvirolab@gmail.com, Website : www.asiaenvirolab.com

Test Report

Report No.: AEL/TSC/23032023/WW/02	Reporting Date:28/03/2023

Issued to: **M/S Titawi Sugar Complex** Village + P.O. – Titavi, Muzaffarnagar- Shamli Byepass Road, Muzaffarnagar, Uttar Pradesh	**Sample I'd** : AEL/TSC/230323/WW/02 **Date** : 23.03.2023 **Period of testing** : 23.03.2023 to 28.03.2023

SAMPLE PARTICULARS:	
Type of the Sample	Untreated Effluent Water Sample
Date of Sample Receiving	22.03.2023
Point of Sample Collection	From ETP Inlet
Sample Collected By	Customer
Purpose of Analysis	Monitoring

TEST RESULTS:

Sr. No.	Parameters	Unit	Results	Test Protocol
1	pH	--	4.40	APHA 23rd Ed. 4500 H B
2	Chemical Oxygen Demand (COD)	mg/l	2480.7	APHA 23rd Ed. P-5220 B
3	Bio-Chemical Oxygen Demand (BOD) at 27°C for 3 days	mg/l	544.3	IS-3025 (P-44)
4	Total Suspended Solids	mg/l	456.9	APHA 23rd Ed. 2540 D
5	Iron (as Fe)	mg/l	184.5	APHA 23rd Ed. 3111 B
6	Manganese (as Mn)	mg/l	28.2	APHA 23rd Ed. 3500 Mn B
7	Chloride, (as Cl)	mg/l	342.7	APHA 23rd Ed.,4500 Cl B
8	Calcium (as Ca)	mg/l	212.1	APHA 23rd Ed.,3500 Ca A
9	Magnesium (as Mg)	mg/l	24.0	APHA 23rd Ed.,3500 Mg B
10	Sulphate, (as SO_4)	mg/l	400.0	APHA 23rd Ed.,4500 SO4
11	Silica (as SiO_2)	mg/l	328.6	APHA 23rdEd. P -4500 SiO_2 D
12	Total Dissolved Solids	mg/l	2146.0	IS-3025(P-16)

Checked By

Authorized Signatory

ASIA ENVIRO LAB BHIWADI

Note: 1. The result listed refer only to the tested samples and applicable parameters.
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ASIA ENVIRO LAB

(An ISO 9001:2015, 14001:2015, 45001:2018 & MOEF Approved Lab)

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Ph. No. : 01493-294022, 09694666022, Email : asiaenvirolab@gmail.com, Website : www.asiaenvirolab.com

Test Report

Report No.: AEL/TSC/23032023/WW/03	Reporting Date:28/03/2023

Issued to:	Sample I'd : AEL/TSC/230323/WW/03
M/S Titawi Sugar Complex Village + P.O. – Titavi, Muzaffarnagar- Shamli Byepass Road, Muzaffarnagar, Uttar Pradesh	**Date** : 23.03.2023 **Period of testing** : 23.03.2023 to 28.03.2023

SAMPLE PARTICULARS:	
Type of the Sample	Treated Effluent Water Sample
Date of Sample Receiving	22.03.2023
Point of Sample Collection	From ETP Clarifier Outlet
Sample Collected By	Customer
Purpose of Analysis	Monitoring

TEST RESULTS:

Sr. No.	Parameters	Unit	Results	Standards Limit as per CPCB	Test Protocol
1	pH	--	7.50	5.5-9.0	APHA 23rd Ed. 4500 H B
2	Chemical Oxygen Demand (COD)	mg/l	80.9	250	APHA 23rd Ed. P-5220 B
3	Bio-Chemical Oxygen Demand (BOD) at 27^0 C for 3 days	mg/l	20.4	30	IS-3025 (P-44)
4	Total Suspended Solids	mg/l	16.2	100	APHA 23rd Ed. 2540 D
5	Iron (as Fe)	mg/l	54.3	3.0	APHA 23rd Ed. 3111 B
6	Manganese (as Mn)	mg/l	<0.02	2.0	APHA 23rd Ed. 3500 Mn B
7	Chloride, (as Cl)	mg/l	15.6	--	APHA 23rd Ed.,4500 Cl B
8	Calcium (as Ca)	mg/l	82.0	--	APHA 23rd Ed.,3500 Ca A
9	Magnesium (as Mg)	mg/l	4.7	2.0	APHA 23rd Ed.,3500 Mg B
10	Sulphate, (as SO_4)	mg/l	80.2	--	APHA 23rd Ed.,4500 SO4
11	Silica (as SiO_2)	mg/l	78.3	--	APHA 23rdEd. P -4500 SiO_2 D
12	Total Dissolved Solids	mg/l	1212.0	--	IS-3025(P-16)

Checked By

Authorized Signatory

Note: 1. The result listed refer only to the tested samples and applicable parameters.
2. Sample will be destroyed one month from the date of issue of test certificate.
3. Any complaints about this report should be communicated within 7 days of issue of this report
4. The report is Not to be reproduced-wholly or in part and can Not be used as an evidence in the Court of law and should Not be used in any advertising Media without our special permission in writing.

ASIA ENVIRO LAB

(An ISO 9001:2015, 14001:2015, 45001:2018 & MOEF Approved Lab)

Job Description : Environmental Testing, ETP/STP Manufacturing, ETP/STP Plant Operation Pollution NOC Etc.

Lab - H1-837, Near Pollution Control Board, RIICO Industrial Area, Bhiwadi, Distt. Alwar (Rajasthan)-301019

Ph. No. : 01493-294022, 09694666022, Email : asiaenvirolab@gmail.com, Website : www.asiaenvirolab.com

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Test Report

Report No.: AEL/TSC/23032023/WW/04	Reporting Date:28/03/2023

Issued to:	
M/S Titawi Sugar Complex Village + P.O. – Titavi, Muzaffarnagar- Shamli Byepass Road, Muzaffarnagar, Uttar Pradesh	**Sample I'd** : AEL/TSC/230323/WW/04 **Date** : 23.03.2023 **Period of testing** : 23.03.2023 to 28.03.2023

SAMPLE PARTICULARS:	
Type of the Sample	Waste Water Sample
Date of Sample Receiving	22.03.2023
Point of Sample Collection	From 2nd Condensate
Sample Collected By	Customer
Purpose of Analysis	Monitoring

TEST RESULTS:

Sr. No.	Parameters	Unit	Results	Test Protocol
1	pH	--	7.30	APHA 23rd Ed. 4500 H B
2	Chemical Oxygen Demand (COD)	mg/l	456.0	APHA 23rd Ed. P-5220 B
3	Bio-Chemical Oxygen Demand (BOD) at 27° C for 3 days	mg/l	64.3	IS-3025 (P-44)
4	Total Suspended Solids	mg/l	<5	APHA 23rd Ed. 2540 D
5	Iron (as Fe)	mg/l	4.2	APHA 23rd Ed. 3111 B
6	Manganese (as Mn)	mg/l	<0.02	APHA 23rd Ed. 3500 Mn B
7	Chloride, (as Cl)	mg/l	<1	APHA 23rd Ed.,4500 Cl B
8	Calcium (as Ca)	mg/l	14	APHA 23rd Ed.,3500 Ca A
9	Magnesium (as Mg)	mg/l	<1	APHA 23rd Ed.,3500 Mg B
10	Sulphate, (as SO_4)	mg/l	<1	APHA 23rd Ed.,4500 SO4
11	Silica (as SiO_2)	mg/l	28.4	APHA 23rdEd. P -4500 SiO_2 D
12	Total Dissolved Solids	mg/l	112.0	IS-3025(P-16)

Checked By

Authorized Signatory

Note: 1. The result listed refer only to the tested samples and applicable parameters.
2. Sample will be destroyed one month from the date of issue of test certificate.
3. Any complaints about this report should be communicated within 7 days of issue of this report
4. The report is Not to be reproduced-wholly or in part and can Not be used as an evidence in the Court of law and should Not be used in any advertising Media without our special permission in writing.

ASIA ENVIRO LAB

(An ISO 9001:2015, 14001:2015, 45001:2018 & MOEF Approved Lab)

Job Description : Environmental Testing, ETP/STP Manufacturing, ETP/STP Plant Operation Pollution NOC Etc.

Lab - H1-837, Near Pollution Control Board, RIICO Industrial Area, Bhiwadi, Distt. Alwar (Rajasthan)-301019

Ph. No. : 01493-294022, 09694666022, Email : asiaenvirolab@gmail.com, Website : www.asiaenvirolab.com

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Test Report

Report No.: AEL/TSC/23032023/WW/05	Reporting Date:28/03/2023

Issued to:	Sample I'd : AEL/TSC/230323/WW/05
M/S Titawi Sugar Complex	Date : 23.03.2023
Village + P.O. – Titavi, Muzaffarnagar-	Period of testing : 23.03.2023 to 28.03.2023
Shamli Byepass Road, Muzaffarnagar, Uttar Pradesh	

SAMPLE PARTICULARS:	
Type of the Sample	Waste Water Sample
Date of Sample Receiving	22.03.2023
Point of Sample Collection	From Exhaust condensate
Sample Collected By	Customer
Purpose of Analysis	Monitoring

Sr. No.	Parameters	Unit	Results	Test Protocol
1	pH	--	7.99	APHA 23rd Ed. 4500 H B
2	Chemical Oxygen Demand (COD)	mg/l	12	APHA 23rd Ed. P-5220 B
3	Bio-Chemical Oxygen Demand (BOD) at 27° C for 3 days	mg/l	<5	IS-3025 (P-44)
4	Total Suspended Solids	mg/l	<5	APHA 23rd Ed. 2540 D
5	Iron (as Fe)	mg/l	<0.02	APHA 23rd Ed. 3111 B
6	Manganese (as Mn)	mg/l	<0.02	APHA 23rd Ed. 3500 Mn B
7	Chloride, (as Cl)	mg/l	<1	APHA 23rd Ed.,4500 Cl B
8	Calcium (as Ca)	mg/l	<1	APHA 23rd Ed.,3500 Ca A
9	Magnesium (as Mg)	mg/l	<1	APHA 23rd Ed.,3500 Mg B
10	Sulphate, (as SO_4)	mg/l	<1	APHA 23rd Ed.,4500 SO4
11	Silica (as SiO_2)	mg/l	<0.1	APHA 23rdEd. P -4500 SiO_2 D
12	Total Dissolved Solids	mg/l	8.0	IS-3025(P-16)

Checked By

Authorized Signatory

ASIA ENVIRO LAB BHIWADI

Note: 1. The result listed refer only to the tested samples and applicable parameters.
2. Sample will be destroyed one month from the date of issue of test certificate.
3. Any complaints about this report should be communicated within 7 days of issue of this report
4. The report is Not to be reproduced-wholly or in part and can Not be used as an evidence in the Court of law and should Not be used in any advertising Media without our special permission in writing.

ANNEXURE - R-9 115

INDIAN POTASH LIMITED

IPL

Unit - TITAWI SUGAR COMPLEX
Village & Post Office - TITAWI
Distt. : MUZAFFARNAGAR (U.P.)
PIN : 251 301
Phone : 0131-2486496, 2486497
FAX : 0131-2486603
CIN : U14219TN1955PLC000961

22nd Sep, 2023

To,

The Regional Officer,

UPPCB, Muzaffarnagar

Sub : Details of major investment done in last two years for strengthening Environment Norms.

Dear Sir,

We want to inform you that we have a good condition of equipments for meeting the air & water pollution norms in our factory which are also verified by VSI, Pune. Time to time inspection/ visits used to be done by CPCB/ UPPCB team & whenever they suggest / recommends for addition of equipments for the upgradation of ETP, we used to promptly made compliance of all the recommendations time to time & a huge investment has been done on this head. During the inspection our ETP & Air Control devices are always found in operation & discharge water is found as per norms in all reports. We will like to inform about the investment details done for improving our equipment related to Air & Water Pollution. Details are enclosed herewith for your information & records.

Thanking you,
Yours faithfully
For Indian Potash Ltd. Unit Titawi Sugar Complex

UNIT HEAD

22.9.23

Encl : As above

INDIAN POTASH LIMITED

EXPENSES INCURRED ON MACHINERIES FOR THE COMPLIANCE OF ENVIRONMENT NORMS DURING LAST 2 YEARS

Sl. No	Pollution related Jobs	Party Name	Amount (Rs.)	Amount (Rs.)	P.O No	Date
1	Establishment of New STP 80 KLD	Paleo Crystal Enviro Technologies, Punjab	1677252	16.77	4500120578	04.09.22
2	Installation of Collection Plate & others at ESP	UMA Enviro Engineering & Contractor	1737550	17.38	4500120536	28.08.22
3	Installation of Dreger, Ventury & Wet Scrubber repair for Ash Management	Enviropol Engineers Pvt. Ltd, Noida	8260000	82.60	4500120565	02.09.22
4	Dredger and Ventury	Enviropol Engineers Pvt. Ltd, Noida	1504500	15.05	4500122693	07.08.23
5	Upgradation of lagoon with Air Blower based fine bubble diffuser	Paleo Crystal Enviro Technologies, Punjab	2285445	22.85	4500120626	08.09.22
6	Installation of Electro Magnatic Flow Meters in Plant	PAE Controls (India) Pvt Ltd, Noida	249722	2.50	4500120858	11.10.22
7	Calibration of Mass Flow Meters	Pioneer Automation & Engineers, Gaziabad	23600	0.24	4500121528	31.12.22
8	Modification in Wet Scrubber	Enviropol Engineers Pvt. Ltd, Noida	944000	9.44	4500120566	02.09.22
9	ESP Repair Work - Spare Parts	UMA Enviro Engineering & Contractor	3945068	39.45	4500120535	27.08.22
10	ESP Repair Work - Spare Parts	UMA Enviro Engineering & Contractor	2062569	20.63	4500122823	19.08.23
11	Overhauling ESP	UMA Enviro Engineering & Contractor	1888000	18.88	4500122824	19.08.23
12	Installation of Decanter for dewatering of ETP	Aspire Solution	2289201	22.89	4500117613	20.02.21
13	Decanter SLAB ETP Civil	Egineers Enterprises	648999	6.49	4500117741	22.03.21
14	Decanter Fabrication	Chaudhary Shokindra	61050	0.61	4500118554	11.09.21
15	Installation of Proposed SRS	Impeccable Water Tech LLP	7139000	71.39	4500123073	15.11.23
	Total		**34715956**	**347.16**		

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INDIAN
POTASH IPL
LIMITED

Unit- TITAWI SUGAR COMPLEX
Village & Post Office - TITAWI
Distt. : MUZAFFARNAGAR (U.P)
Phone : 0131-2486496, 2486497
FAX: 0131-2486603
CIN: U14219TN1955PLC000961

22nd Sep, 2023

To,

The Regional Officer,

UPPCB, Muzaffarnagar

Sub: Details of major investment done in last two years for strengthening Environment Norms.

Dear Sir,

We want to inform you that we have a good condition of equipment's for meeting the air & water pollution norms in our factory which are also verified by VSI, Pune. Time to time inspection/ visits used to be done by CPCB/ UPPCB team & whenever they suggest / recommends for addition of equipment's for the upgradation of ETP, we used to promptly made compliance of all the recommendations time to time & a huge investment has been done on this head. During the inspection our ETP 8 Air Control devices are always found in operation & discharge water is found as per norms in all reports. We will like to inform about the investment details done

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for improving our equipment related to Air & Water Pollution. Details are enclosed herewith for your information & records.

Thanking you,
Yours faithfully
For Indian Potash Ltd. Unit Titawi Sugar Complex

UNIT HEAD

Encl : As above

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INDIAN POTASH LIMITED

EXPENSE INCURRED ON MACHINERIES FOR THE COMPLIANCE OF ENVIRONMENT NORMS DURING LAST 2 YEARS

Sl. No	Pollution Related Jobs	Party Name	Amount (Rs.)	Amount (Rs.)	P.O. No.	Date
1.	Establishment of New STP 80 KLD	Paleo Crystal Enviro Technologies, Punjab	1677252	16.77	4500120578	04.09.22
2.	Installation of collection plate & other ESP	UMA Enviro Engineering & Contractor	1737550	17.38	4500120536	28.08.22
3.	Installation of Dreger, ventury & wet scrubber repair for ash management	Enviropol Engineers Pvt. Ltd., Noida	8260000	82.60	4500120565	02.09.22
4.	Dredger and Ventury	Enviropol Engineers Pvt. Ltd., Noida	1504500	15.05	4500122693	07.08.23

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5.	Upgradation of lagoon with Air Blower based fine bubble diffuser	Paleo Crystal Enviro Technologies, Punjab	2285445	22.85	4500120626	08.09.22
6.	Installation of Electri Magnatic Flow Meters in Plant	PAE Controls (India) Pvt. Ltd., Noida	249722	2.50	4500120858	11.10.22
7.	Calibration of Mass Flow Meters	Pioneer Automation & Engineers, Ghaziabad	23600	0.24	4500121528	31.12.22
8.	Modification of wet scrubber	Enviropol Engineers Pvt. Ltd., Noida	944000	9.44	4500120566	02.09.22
9.	ESP Repair Work-spare parts	UMA Enviro Engineering & Contractor	3945068	39.45	4500120535	27.08.23
10.	ESP Repair Work-spare parts	UMA Enviro Engineering & Contractor	2062569	20.63	4500122823	19.08.23

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11.	Overhauling ESP	UMA Enviro Engineering & Contractor	1888000	18.88	4500122824	19.08.23
12.	Installation of Decanter for dewatering of ETP	Aspire Solution	2289201	22.89	4500117613	20.02.21
13.	Decanter SLAB ETP Civil	Engineers Enterprises	648999	6.49	4500117741	22.03.21
14.	Decanter Fabrication	Chaudhary Shokindra	61050	0.61	4500118554	11.09.21
15.	Installtion of proposed SRS	Impeccable water Tech LLP	7139000	71.39	4500123073	15.11.23
	Total		34715956	347.16		

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ANNEXURE -R-10.

INDIAN POTASH LIMITED

IPL

Unit - TITAWI SUGAR COMPLEX
Village & Post Office - TITAWI
Distt. : MUZAFFARNAGAR (U.P.)
PIN : 251 301
Phone : 0131-2486496, 2486497
FAX : 0131-2486603
CIN : U14219TN1955PLC000961

23rd Sep, 2023

The Regional Officer,

UPPCB, Muzaffarnagar

Dear Sir,

This is to bring into your kind notice that we have incurred following expenses in nearby area of factory to maintain environment and also find attached herewith the details of average of parameter recoded in online monitoring system through OCEMS from 16th Dec, 2022 to 02nd Feb, 2023 installed at ETP outlet of our factory.

Sl.No	Jobs	Amount	P.O	P.O Date
1	Cleaning of Drain infront of Factory	Rs.129,285/-	4500122021 4500122662	31.03.23 05.08.23
2	Maintenance of Pond in near by villages - Mukundpur, Jasoi, Lardwa.	Rs.1,14,750/-	4500122957, 4500121971	01.09.23 23.03.23

Thanking you,

Yours faithfully

For Indian Potash Ltd. Unit Titawi Sugar Complex

UNIT HEAD

28/9/23

End : As above

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Company Name	Tidaw Sugar Complex				
Station Name	ETP-1				
Parameter Name	pH	BOD	COD	TSS	FLOW (m3/hr)
Permissible Range	5.5-8.5 (pH)	30 (Mg/l)	250 (Mg/l)	100 (Mg/l)	
16-12-2022 00:00:00	7.01	11.76	60.69	9.29	22.37
17-12-2022 00:00:00	7.21	20.98	106.66	13.84	22.16
18-12-2022 00:00:00	7.22	18.33	93.44	10.44	22.67
19-12-2022 00:00:00	7.14	7.02	36.54	4.16	24.63
20-12-2022 00:00:00	7.41	16.29	83.22	11.96	21.36
21-12-2022 00:00:00	7.22	19.82	100.75	13.92	23.17
22-12-2022 00:00:00	7.17	19.43	98.87	13.81	24.49
23-12-2022 00:00:00	7.15	16.03	82.00	10.37	22.62
24-12-2022 00:00:00	7.15	15.82	80.79	10.09	22.70
25-12-2022 00:00:00	7.12	18.18	92.63	12.84	22.24
26-12-2022 00:00:00	7.10	17.24	87.88	11.23	22.30
27-12-2022 00:00:00	7.08	13.68	70.17	6.32	23.21
28-12-2022 00:00:00	7.06	18.32	93.22	10.91	24.64
29-12-2022 00:00:00	7.03	17.72	90.30	10.37	24.25
30-12-2022 00:00:00	7.03	17.62	89.84	10.87	23.42
31-12-2022 00:00:00	7.01	17.86	91.05	10.96	24.10
01-01-2023 00:00:00	7.02	19.23	97.87	12.71	25.10
02-01-2023 00:00:00	7.02	19.56	99.41	12.34	22.72
03-01-2023 00:00:00	7.02	19.97	101.53	12.07	23.41
04-01-2023 00:00:00	7.01	22.45	113.91	14.33	23.40
05-01-2023 00:00:00	7.00	21.79	110.70	13.46	22.66
06-01-2023 00:00:00	7.00	21.23	107.70	12.47	22.77
07-01-2023 00:00:00	7.00	24.65	124.78	16.49	23.91
08-01-2023 00:00:00	7.00	22.49	114.01	13.92	22.62
09-01-2023 00:00:00	6.95	22.39	113.55	14.17	22.96
10-01-2023 00:00:00	6.95	19.47	99.08	11.73	23.65
11-01-2023 00:00:00	6.97	11.07	57.01	4.04	23.55
12-01-2023 00:00:00	6.98	13.66	70.13	6.40	24.52
13-01-2023 00:00:00	7.00	17.25	88.07	9.43	23.26
14-01-2023 00:00:00	6.98	13.59	69.73	5.99	22.28
15-01-2023 00:00:00	7.01	20.32	103.43	12.96	22.56
16-01-2023 00:00:00	6.98	14.47	73.97	6.30	23.74
17-01-2023 00:00:00	6.99	19.61	99.61	11.70	23.05
18-01-2023 00:00:00	7.01	18.97	96.52	10.18	24.39
19-01-2023 00:00:00	7.01	18.16	92.46	8.95	22.39
20-01-2023 00:00:00	7.00	22.01	111.73	12.53	25.20
21-01-2023 00:00:00	6.99	21.18	107.55	10.98	22.22
22-01-2023 00:00:00	6.98	21.94	111.37	11.86	23.45
23-01-2023 00:00:00	6.99	21.65	110.08	11.36	23.92
24-01-2023 00:00:00	6.97	22.50	114.36	11.85	22.87
25-01-2023 00:00:00	6.95	24.15	122.52	13.15	23.24
26-01-2023 00:00:00	6.83	23.95	121.67	13.63	23.09
27-01-2023 00:00:00	6.84	22.02	111.88	12.22	23.10
28-01-2023 00:00:00	6.96	20.70	105.21	11.52	21.18
29-01-2023 00:00:00	7.02	20.82	105.84	12.18	21.20
30-01-2023 00:00:00	7.08	21.06	106.95	12.53	20.34
31-01-2023 00:00:00	7.12	21.36	108.67	12.71	23.61
01-02-2023 00:00:00	7.15	21.50	109.27	12.82	21.43
02-02-2023 00:00:00	7.17	18.05	92.15	10.03	22.61

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INDIAN POTASH LIMITED

Unit - TITAWI SUGAR COMPLEX
Village & P.O. - TITAWI, Distt : MUZAFFARNAGAR - 251 301 (U.P.)
PHONE: 0131 - 2486452, 2486497, FAX : 0131 - 2486603
E-mail : tsc@potindia.com
IPL
H.O. / Regd. Offi. : I[st] Floor, Seethakathi Business Centre, 684-690, Anna Salai, Chennai - 600 006
Corporate Office : 10-B, Rajendra Park, Pusa Road, New Delhi - 110060

GSTIN : 09AAACI0888H5ZA **PURCHASE ORDER** PAN : AAACI0888H

SURENDRA

MOH. TTHAT ,
MAWANA MEERUT

Service Order

GST NO : 09AAACI0888H5ZA
PO number/date
4500122957 / 01.09.2023
Contact person/Telephone
Umesh Sharma/0131-2486497

Your vendor number with us
S1421
GST NO :

Please deliver to:
Indian Potash Limited
Unit Titawi Sugar Complex,
V & PO - Titawi - 251301
Dist. Muzaffarnagar, Uttar Pradesh

Valid from: 01.09.2023
Valid to: 31.10.2023
Delivery date: Day 31.10.2023

Terms of delivery: FOR TSC, TITAWI
Terms of payment: 100% as mentioned in Purchase Order Terms
Currency INR

Vendor Reference No.
-UNIT APPROVAL ATTACHED
-RATES AS PER PURCHASE ORDER NO.4500122662 DT.05.08.2023.

Item / HSN Code	Material	Description / Price per unit	Order qty.	Unit / Net value
10		HIRING OF JCB	1	Activ.unit
		29,750.00	1AU	29,750.00

For M/s Titawi Sugar Complex,

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INDIAN POTASH LIMITED

Unit - TITAWI SUGAR COMPLEX
Village & P.O. - TITAWI, Distt : MUZAFFARNAGAR - 251 301 (U.P.)
PHONE: 0131 - 2486452, 2486497, FAX : 0131 - 2486603
E-mail : tsc@potindia.com
H.O. / Regd. Offi. : I^st Floor, Seethakathi Business Centre, 684-690, Anna Salai, Chennai - 600 006
Corporate Office : 10-B, Rajendra Park, Pusa Road, New Delhi - 110060

IPL

GSTIN : 09AAACI0888H5ZA

PURCHASE ORDER

PAN : AAACI0888H

SURENDRA

PO number/date 4500122957 / 01.09.2023

Item	Material	Description	Order qty.	Unit	Price per unit	Net value
HSN Code						
The item covers the following services:						
10		HIRING OF JCB	35.0	HR	850.00	29,750.00

-HIRING OF JCB FOR LEVELING OF ROAD SIDE IN FRONT OF MILL PMKSK & KISSAN SEWA KENDRA BAGHRA.

Total PO Value INR **29,750.00**

Total PO Value in Word: INR Twenty Nine Thousand Seven Hundred Fifty Only

Terms of delivery
-IMMEDIATE

Terms of payment
-100% PAYMENT AFTER SUBMISSION OF BILLS DULY VERIFIED BY CONCERNED OFFICER.

1. Please mention our Purchase Order No., Item Codes & your Vendor Code with us in all your invoices.
2. Duplicate for Transporter invoice must accompany supply, if applicable.

For M/s Titawi Sugar Complex,

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INDIAN POTASH LIMITED

IPL
Unit - TITAWI SUGAR COMPLEX
Village & P.O. - TITAWI, Distt : MUZAFFARNAGAR - 251 301 (U.P.)
PHONE: 0131 - 2486452, 2486497, FAX : 0131 - 2486603
E-mail : tsc@potindia.com
H.O. / Regd. Offi. : I[st] Floor, Seethakathi Business Centre, 684-690, Anna Salai, Chennai - 600 006
Corporate Office : 10-B, Rajendra Park, Pusa Road, New Delhi - 110060
GSTIN : 09AAACI0888H5ZA
PAN : AAACI0888H

PURCHASE ORDER

SURENDRA

MOH. TTHAI ,
MAWANA MEERUT

Service Order

GST NO : 09AAACI0888H5ZA
PO number/date
4500121971 / 22.03.2023
Contact person/Telephone
Umesh Sharma/0131-2486497

Your vendor number with us
S1421
GST NO :

Please deliver to:
Indian Potash Limited
Unit Titawi Sugar Complex,
V & PO - Titawi - 251301
Dist. Muzaffarnagar, Uttar Pradesh

Valid from: 01.03.2023
Valid to: 30.04.2023
Delivery date: Day 31.03.2023

Terms of delivery: FOR TSC, TITAWI
Terms of payment: 100% as mentioned in Purchase Order Terms
Currency INR

Vendor Reference No.
-SOP & UNIT APPROVAL ATTACHED

Item	Material	Description	Order qty.	Unit	Price per unit	Net value	HSN Code
10		HIRING OF JCB FOR CLEANING OF ETP	1	Activ.unit			
	Gross Price		85,000.00	INR	1AU	85,000.00	

For M/s Titawi Sugar Complex,

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INDIAN POTASH LIMITED

Unit - TITAWI SUGAR COMPLEX
Village & P.O. - TITAWI, Distt : MUZAFFARNAGAR - 251 301 (U.P.)
PHONE: 0131 - 2486452, 2486497, FAX : 0131 - 2486603
E-mail : tsc@potindia.com
H.O. / Regd. Offi. : I st Floor, Seethakathi Business Centre, 684-690, Anna Salai, Chennai - 600 006
Corporate Office : 10-B, Rajendra Park, Pusa Road, New Delhi - 110060

GSTIN : 09AAACI0888H5ZA

PURCHASE ORDER

PAN : AAACI0888H

SURENDRA

PO number/date 4500121971 / 22.03.2023 Page 2

Item	Material / HSN Code	Description	Order qty.	Unit	Price per unit	Net value
10		HIRING OF JCB FOR CLEANING OF ETP	100.0	HR	850.00	85,000.00

The item covers the following services:

-HIRING OF JCB FOR CLEANING OF ETP & OUTSIDE DRAIN.

Total PO Value INR 85,000.00

Total PO Value in Word: INR Eighty Five Thousand Only

Terms of delivery
-IMMEDIATE

Terms of payment
-100% PAYMENT AFTER SUBMISSION OF BILLS DULY VERIFIED BY CONCERNED OFFICER.

1. Please mention our Purchase Order No., Item Codes & your Vendor Code with us in all your invoices.
2. Duplicate for Transporter invoice must accompany supply, if applicable.

For M/s. Titawi Sugar Complex,

TRUE TYPED COPY OF ANNEXURE R-10 (28)

INDIAN POTASH LIMITED IPL

Unit- TITAWI SUGAR COMPLEX
Village & Post Office - TITAWI
Distt. : MUZAFFARNAGAR (U.P)
Phone : 0131-2486496, 2486497
FAX: 0131-2486603
CIN: U14219TN1955PLC000961

23rd Sep, 2023

The Regional Officer,

UPPCB, Muzaffarnagar

Dear Sir,

This is to bring into your kind notice that we have incurred following expenses in nearby area of factory to maintain environment and also find attached herewith the details of average of parameter recoded in online monitoring system through OCEMS from 16th Dec, 2022 to 02nd Feb, 2023 installed at ETP outlet of our factory.

Sl. No.	Jobs	Amount	P.O.	P.O. Date
1.	Cleaning of Drain Infront of Factory	Rs. 129,285/-	4500122021 4500122662	31.03.23 05.08.23
2.	Maintenance of Pond in nearby villages – Mukundpur, Jasoi, Lardwa.	Rs. 1,14,750/-	4500122957, 4500121971	01.09.23 23.03.23

Thanking you,

Yours faithfully
For Indian Potash Ltd. Unit Titawi Sugar Complex

Unit Head

Encl : As above

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Company Name	Titwai Sugar Complex				
Station Name	ETP 1				
Parameter Name	pH	BOD	COD	TSS	FLOW (m3/hr)
Permissible Range	5.5-8.5 (pH)	30 (Mg/l)	250 (Mg/l)	100 (Mg/l)	-
16-12-2022 00:00:00	7.01	11.76	60.69	9.29	22.37
17-12-2022 00:00:00	7.21	20.98	106.66	13.84	22.16
18-12-2022 00:00:00	7.22	18.33	93.44	10.44	22.67
19-12-2022 00:00:00	7.14	7.02	36.54	4.16	24.63
20-12-2022 00:00:00	7.41	16.29	83.22	11.96	21.36
21-12-2022 00:00:00	7.22	19.82	100.75	13.92	23.17
22-12-2022 00:00:00	7.17	19.43	98.87	13.81	24.49
23-12-2022 00:00:00	7.15	16.03	82.00	10.37	22.62
24-12-2022 00:00:00	7.15	15.82	80.79	10.09	22.70
25-12-2022 00:00:00	7.12	18.18	92.63	12.84	22.24
26-12-2022 00:00:00	7.10	17.24	87.88	11.23	22.30
27-12-2022 00:00:00	7.08	13.68	70.17	6.32	23.21
28-12-2022 00:00:00	7.06	18.32	93.22	10.91	24.64
29-12-2022 00:00:00	7.03	17.72	90.30	10.37	24.25
30-12-2022 00:00:00	7.03	17.62	89.84	10.87	23.42
31-12-2022 00:00:00	7.01	17.86	91.05	10.96	24.10
01-01-2023 00:00:00	7.02	19.23	97.87	12.71	25.10
02-01-2023 00:00:00	7.02	19.56	99.41	12.34	22.72
03-01-2023 00:00:00	7.02	19.97	101.53	12.07	23.41

1:30

04-01-2023 00:00:00	7.01	22.45	113.91	14.33	23.40
05-01-2023 00:00:00	7.00	21.79	110.70	13.46	22.66
06-01-2023 00:00:00	7.00	21.23	107.70	12.47	22.77
07-01-2023 00:00:00	7.00	24.65	124.78	16.49	23.91
08-01-2023 00:00:00	7.00	22.49	114.01	13.92	22.62
09-01-2023 00:00:00	6.95	22.39	113.55	14.17	22.96
10-01-2023 00:00:00	6.95	19.47	99.08	11.73	23.65
11-01-2023 00:00:00	6.97	11.07	57.01	4.04	23.55
12-01-2023 00:00:00	6.98	13.66	70.13	6.40	24.52
13-01-2023 00:00:00	7.00	17.25	88.07	9.43	23.26
14-01-2023 00:00:00	6.98	13.59	69.73	5.99	22.28
15-01-2023 00:00:00	7.01	20.32	103.43	12.96	22.56
16-01-2023 00:00:00	6.98	14.47	73.97	6.30	23.74
17-01-2023 00:00:00	6.99	19.61	99.61	11.70	23.05
18-01-2023 00:00:00	7.01	18.97	96.52	10.18	24.39
19-01-2023 00:00:00	7.01	18.16	92.46	8.95	22.39
20-01-2023 00:00:00	7.00	22.01	111.73	12.53	25.20
21-01-2023 00:00:00	6.99	21.18	107.55	10.98	22.22
22-01-2023 00:00:00	6.98	21.94	111.37	11.86	23.45
23-01-2023 00:00:00	6.99	21.65	110.08	11.36	23.92
24-01-2023 00:00:00	6.97	22.50	114.36	11.85	22.87
25-01-2023 00:00:00	6.95	24.15	122.52	13.15	23.24
26-01-2023 00:00:00	6.83	23.95	121.67	13.63	23.09
27-01-2023 00:00:00	6.84	22.02	111.88	12.22	23.10

13)

28-01-2023 00:00:00	6.96	20.70	105.21	11.52	21.18
29-01-2023 00:00:00	7.02	20.82	105.84	12.18	21.20
30-01-2023 00:00:00	7.08	21.06	106.95	12.53	20.34
31-01-2023 00:00:00	7.12	21.36	108.67	12.71	23.61
01-02-2023 00:00:00	7.15	21.50	109.27	12.82	21.43
02-02-2023 00:00:00	7.17	8.05	92.15	10.03	22.61

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INDIAN POTASH LIMITED

TITAWI SUGAR COMPLEX
Unit- Village & Post Office - TITAWI
Distt. : MUZAFFARNAGAR (U.P)
Phone : 0131-2486496, 2486497
FAX: 0131-2486603
Email: tsc@potindia.com
H.o./Regd Off.: 1st Floor, Seethakathi Business Center, 684-690, Anna Salai, Chennai-600006; Corporate Office: 10-B , Rajendra Park, Pusa Road, New Delhi-110060

GST: 09AAACI0888H5ZA PURCHASE ORDER PAN: AAACI0888H

Service Order

SURENDRA

MOH. TIHAI

MAWANA MEERUT

GST No. 09AAACI0888H5ZA
Po No. 4500122957/01.09.23
Contact Person/ Telephone
Umesh Sharma/0131-2486497

Your Vendor Number with us

SI421

GST No:

133

Please delivery to :	Valid From:	01.09.2023
Indian Potash Limited	Valid to:	31.10.2023
Unit Titwai Sugar Complex,	Delivery date:	Day 31.10.2023

V & PO-Titwai-251301

Dist. Muzaffarnagar, Uttar Pradesh

Terms of delivery: FOR TSC, TITWAI

Terms of payment: 100% as mentioned in purchase order Terms

Currency: INR

Vendor Reference No.

- UNIT APPROVAL ATTACHED
- RATE AS PER PURCHASE ORDER NO. 4500122662 DT. 05.08.2023.

Item	Material	Description	Order Qty.	Unit
HSN Code		Price per Unit		Net Value

10	HIRING OF JCB	1		Active. Unit
	29,750.00	1AU		29,750.00

For, M/s Titawi Sugar Complex

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INDIAN POTASH LIMITED

TITAWI SUGAR COMPLEX
Unit- Village & Post Office - TITAWI
Distt. : MUZAFFARNAGAR (U.P)
Phone : 0131-2486496, 2486497
FAX: 0131-2486603
Email: tsc@potindia.com
H.o./Regd Off.: 1st Floor, Seethakathi Business Center, 684-690, Anna Salai, Chennai-600006; Corporate Office: 10-B , Rajendra Park, Pusa Road, New Delhi-110060

GST: 09AAACI0888H5ZA PURCHASE ORDER PAN: AAACI0888H

PO No. 4500122957/ 01.09.2023 Page 2

SURENDRA

Item	Material	Description	Order Qty.	Unit
HSN Code		Price per Unit		Net Value
The item covers the following services:				
10	HIRING OF JCB		35.0	HR
		850.00		29,750.00
	- HIRING OF JCB FOR LEVELING OF ROAD SIDE IN FRONT OF MILL PMKSK & KISSAN SEWA KENDRA BAGHRA.			

Total PO Value	INR	29, 750.00

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Total PO value in Word: INR Twenty Nine Thousand Seven Hundred Fifty Only

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Terms of Delivery

- Immediate

Terms of payment

- 100% PAYMENT AFTER SUBMISSION OF BILLS DULY-VERIFIED BY CONCERNED OFFICER.

1. Please mention our purchase order No., item codes & your vendor code with us in all your invoices.
2. Duplicate for transporter invoice must accompany supply, if applicable.

For, M/s Titawi Sugar Complex

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INDIAN POTASH LIMITED

TITAWI SUGAR COMPLEX
Unit- Village & Post Office - TITAWI
Distt. : MUZAFFARNAGAR (U.P)
Phone : 0131-2486496, 2486497
FAX: 0131-2486603
Email: tsc@potindia.com
H.o./Regd Off.: 1st Floor, Seethakathi Business Center, 684-690, Anna Salai, Chennai-600006; Corporate Office: 10-B , Rajendra Park, Pusa Road, New Delhi-110060

GST: 09AAACI0888H5ZA PURCHASE ORDER PAN: AAACI0888H

Service Order

SURENDRA

MOH. TIHAI

MAWANA MEERUT

GST No. 09AAACI0888H5ZA
Po No. 4500121971/22.03.23
Contact Person/ Telephone
Umesh Sharma/0131-2486497

Your Vendor Number with us

SI421

GST No:

137

Please delivery to :		Valid From:	01.03.2023
Indian Potash Limited		Valid to:	30.04.2023
Unit Titwai Sugar Complex,		Delivery date:	Day 31.03.2023

V & PO-Titwai-251301

Dist. Muzaffarnagar, Uttar Pradesh

Terms of delivery: FOR TSC, TITWAI

Terms of payment: 100% as mentioned in purchase order Terms

Currency: INR

Vendor Reference No.

- SOP & UNIT APPROVAL ATTACHED

Item	Material	Description	Order Qty.	Unit
HSN Code		Price per Unit		Net Value

10	HIRING OF JCB FOR CLEANING OF ETP		1	Active. Unit
	Gross Price	85,000.00 INR	1AU	85,000.00

For, M/s Titawi Sugar Complex

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INDIAN POTASH LIMITED

TITAWI SUGAR COMPLEX
Unit- Village & Post Office - TITAWI
Distt. : MUZAFFARNAGAR (U.P)
Phone : 0131-2486496, 2486497
FAX: 0131-2486603
Email: tsc@potindia.com
H.o./Regd Off.: 1st Floor, Seethakathi Business Center, 684-690, Anna Salai, Chennai-600006; Corporate Office: 10-B , Rajendra Park, Pusa Road, New Delhi-110060

GST: 09AAACI0888H5ZA PURCHASE ORDER PAN: AAACI0888H

PO No. 4500121971/ 22.03.2023 Page 2

SURENDRA

Item	Material	Description	Order Qty.	Unit
HSN Code		Price per Unit		Net Value

The item covers the following services:

10	HIRING OF JCB FOR CLEANING OF ETP	100.0	HR
	850.00		85,000.00

- HIRING OF JCB FOR CLEANING OF ETP & OUTSIDE DRAIN.

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Total PO Value	INR	85, 000 .00

Total PO value in Word: INR Eighty Thousand Five Hundred Only

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Terms of Delivery

- Immediate

Terms of payment

- 100% PAYMENT AFTER SUBMISSION OF BILLS DULY-VERIFIED BY CONCERNED OFFICER.

3. Please mention our purchase order No., item codes & your vendor code with us in all your invoices.
4. Duplicate for transporter invoice must accompany supply, if applicable.

For, M/s Titawi Sugar Complex

ANNEXURE - R-11. 140

INDIAN POTASH LIMITED

IPL

Unit - TITAWI SUGAR COMPLEX
Village & Post Office : TITAWI
Distt. MUZAFFARNAGAR (U.P.)
PIN : 251 301
Phone : 0131-2486496, 2486497
Fax : 0131-2486603
CIN : U14219TN1955PLC000961

26th September, 2023

The Regional Officer,

UPPCB, Muzaffarnagar

Sub :- Possibility of error due to huge variation of parameter while sampling in same drain.

Dear Sir,

This is to bring into your kind notice that as per the orders of Ld. N.G.T, total 13 samples of water were collected in presence of Constituted Joint Committee on 20.12.2022. In this connection, all the samples at ETP (Sample No.01,3,4,5,6&7), Cooling Tower(Sample No.02), 02 samples of drain(Sample No.12 – ETP Outlet & Sample No.09 -Drain near STP) inside the factory premises were found as per norms but Sample No.08 which is around 150 meter distance from the ETP Outlet was indicating higher BOD and the BOD of sample no.09 of the same drain which is around 140 meter distance from sample no.08 was under norms.

We would like to say that Committee took 3 samples of the ETP discharge drain and 1 parameter of the sample was found higher BOD out of 3 samples of same drain. It seems that there may be any sampling error because 02 samples of the same drain are under norms. However, CPCB through third party had again inspected our plant on 25.02.2023 and all the water samples of the unit were found under norms as per UPPCB letter dated 10.04.2023

Please take a look of it.

Thanking you,
Yours faithfully,
For Indian Potash Ltd. Unit Titawi Sugar Complex

Unit Head

Encl : Detailed lay out of locations of samples collected on 20.12.2022.

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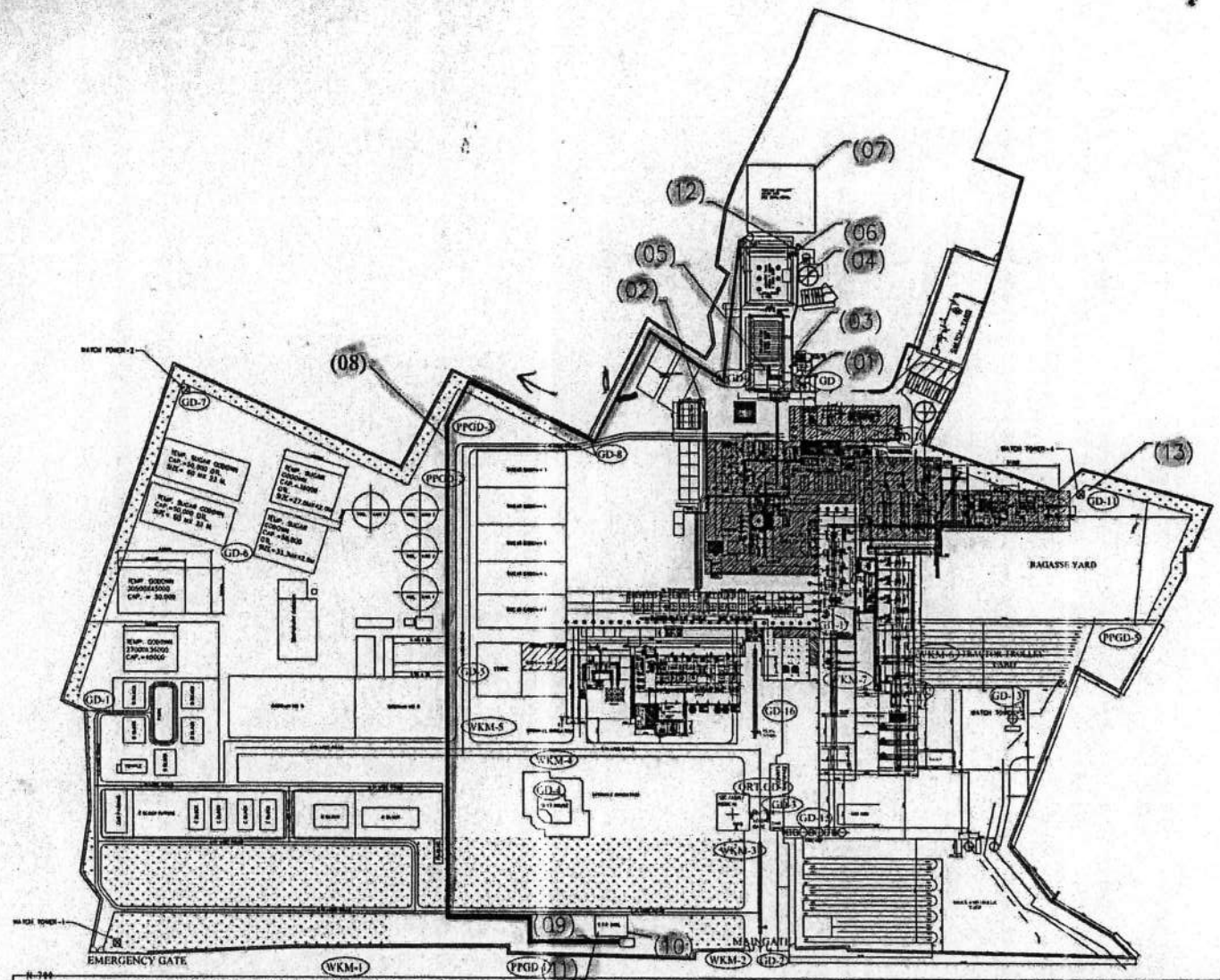
LOCATION OF WATER SAMPLES COLLECTED IN PRESENCE OF THE JOINT COMMITEE FORMED BY Ld. NGT (FORM NO 1) ON DATED 20-12-2022



LOCATION OF SAMPLES COLLECTED

(1) ETP INLET
(2) COOLING TOWER OVERFLOW
(3) PRIMARY CLARIFIER OUTLET
(4) SECONDRY CLARIFIER OUTLET
(5) EQUALISATION TANK
(6) AERATION TANK
(7) LAGOON
(8) DRAIN INSIDE (NEAR ETP)
(9) DRAIN NEAR STP
(10) STP INLET
(11) STP OUTLET
(12) ETP OUTLET
(13) BOREWELL

LEGEND OF:-

	CYCLE/SECURITY TRACK
	BOUNDRY WALL
GD	GUARD
PPGD	PROTECTIVE PATROL
QRT GD	QUICK REACTION TEAM
WKM	WORKMAN TEAM
	CAMERAS
	WATCH TOWER
	UNIT-1
	UNIT-2
	CO-GEN AND BOILER

TITAWI SUGAR COMPLEX,
MUZAFFARNAGAR,UTTAR PRADESH

FACTORY LAYOUT PLAN

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cpcb

FORM 1

(See rule 7 of the E (P) Rules, 1986)

Notice of intention to have sample analyzed

To,

M/s Titawi Sugar Complex
Village Titawi
Muzaffarnagar

Take this notice that it is intended to have analyzed the samples of Effluent Treatment Plant [ETP] which has been taken today, the 20th December day of Tuesday 2022 from M/S Titawi Sugar Complex Muzaffarnagar

(Name and designation of the person who takes the sample).
Ms. Reena Satavan, Sc'D' CPCB
Sh. Vipul Kumar, AEE, UPPCB

Locations of the place where the sample were taken.

1. ETP inlet
2. Cooling tower overflow
3. Primary clarifier o/l
4. Sec. clarifier o/l
5. Eq. tank
6. Aeration tank
7. Lagoon
8. Drain inside (near ETP)
9. Drain near STP
10. STP i/l
11. STP o/l
12. ETP o/l
13. Borewell

✓(Duplicate samples were given to the unit)

(SEAL) INDIAN POTASH LIMITED Unit: Titawi Sugar Complex Titawi Pin-251301

Tahil Dev
Asstt manager EHS

Dh
AGM(P)

DATE

Signature:	20/12/22	20/12/22
Name:	Reena Satavan	Vipul Kumar
Designation:	Sc'D' CPCB	AEE UPPCB.

TRUE TYPED COPY OF ANNEXURE R-II 143

INDIAN
POTASH IPL
LIMITED

Unit- TITAWI SUGAR COMPLEX
Village & Post Office - TITAWI
Distt. : MUZAFFARNAGAR (U.P)
Phone : 0131-2486496, 2486497
FAX: 0131-2486603
CIN: U14219TN1955PLC000961

26th Sep, 2023

The Regional Officer,
UPPCB, Muzaffarnagar

Sub :- Possibility of error due to huge variation of parameter while sampling in same drain.

Dear Sir,

This is to bring into your kind notice that as per the orders of Ld. N.G.T, total 13 samples of water were collected in presence of Constituted Joint Committee on 20.12.2022. In this connection, all the samples at ETP (Sample No.01,3,4,5,6 & 7), Cooling Tower (Sample No.02), 02 samples of Drain (Sample No.12 — ETP Outlet & Sample No.09 -Drain near STP) inside the factory premises were found as per norms but Sample No.08 which is around 150-meter distance from the ETP Outlet was indicating higher BOD and the BOD of sample no.09 of the same drain which is around 140 meter distance from sample no.08 was under norms.

We would like to say that Committee took 3 samples of the ETP discharge

drain and 1 parameter of the sample was found higher BOD out of 3 samples of same drain. It seems that there may be any sampling error because 02 samples of the same drain are under norms, However, CPCB through third party had again inspected our plant on 25.02.2023 and all the water samples of the unit were found under norms as per UPPCB letter dated 10.04.2023

Please take a look of it.

Thanking you,
Yours faithfully,
For Indian Potash Ltd. Unit Titawi Sugar Complex

Unit Head

Encl : Detailed lay out of locations of sample collected on 20.12.2022.

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CPCB

(See Rule 7 of the E(P) Rules 1986.

Notice of intention to have sample analysed.

To

M/s. Titawi Sugar Complex.
Village Titawi.
Muzaffarnagar.

Take this notice that it is intended to have analysed the sample of Effluent Treatment Plant (ETP) which has been taken today 20th December Tuesday 2022 from M/s. Titawi Sugar Complex. Muzaffarnagar.

(Name and designation of the person who takes the samples)

Ms. Reena Satavan SC "D" CPCB.
Sh. Vipul Kumar AEE CPCB.
Location of the places where the sample were taken.

1. EPT inlet.
2. Colony tower over
3. Primary clafia O/1
4. Sc. Clarifier 0/2
5. Dq. Tank.

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6. Avation tank.
7. Lagaon
8. Drain inside (non ETP)
9. Drain water STP
10. STP
11. STP O/l
12. ETP O/L
13. Borewell.

Duplicate samples were given to unit.

Seal

signature Sd/-

Name : Reena Satavan

Designation : SC"D"

Seal.

ANNEXURE-R-12. 147

INDIAN POTASH LIMITED

IPL

Unit - TITAWI SUGAR COMPLEX
Village & Post Office - TITAWI
Distt. : MUZAFFARNAGAR (U.P.)
PIN : 251 301
Phone : 0131-2486496, 2486497
FAX : 0131-2486603
CIN : U14219TN1955PLC000961

25th September, 2023

The Regional Officer,
UPPCB, Muzaffarnagar

Sub :- Plantation of around 5000 Plants in factory as per the directions of UPPCB and Vrahad Vraksha Ropan Maha Abhiyan- 2023.

Dear Sir,

This is to bring into your kind notice that as per your directions vide your letter No.293/G-39/Vraksharopan/Muzaffarnagar/2023 dated 07.07.2023 and Vrahad Vraksha Ropan Maha Abhiyan-2023 campaign started by State & Central Government for the clean & healthy environment, we have participated in the campaign and planted more than 5000 Plants of various varieties like Sagoon, Arjun, Amrood, Jamun, Shesham, Kanji & Sahjan in our factory with recommended latest Miyawaki technique for the clean and healthy environment.

Thanking you,
Yours faithfully,
For Indian Potash Ltd. Unit Titawi Sugar Complex

Unit Head

Encl : As above

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जिले में रोपे गए 24.06 लाख पौधे

जिले में पौधरोपण अभियान वृहद स्तर पर चलाया गया

संवाद न्यूज एजेंसी

Amar Ujala
23.07.23

मुजफ्फरनगर। जिले में पौधारोपण अभियान वृहद स्तर पर चलाया गया। जनपद में 24 लाख छह हजार 192 पौधे लगाए गए। सरकारी संस्थानों, स्कूलों, कॉलेजों में अभियान चलाया गया।

कमला नेहरू वाटिका कंपनी बाग में राज्य मंत्री कपिल देव अग्रवाल, नगर पालिका चेयरपर्सन मीनाक्षी स्वरूप ने पौधारोपण किया। लोक अदालत के नोडल अधिकारी अपर जिला जज शक्ति सिंह, दीवानी न्यायालय कर्मचारी संघ के अध्यक्ष अमरदीप सिंह, सचिव कपिल देव शर्मा सहित बड़ी संख्या में न्यायिक अधिकारी एवं कर्मचारियों ने पौधारोपण किया। न्यायालय परिसर में विभिन्न प्रजातियों के दर्जनों पौधे रोपे गए। पुलिस लाइन में पुलिस अधीक्षक नगर सत्य नारायण प्रजापत ने पौधारोपण किया।

दीपचंद ग्रेन चैंबर इंटर कॉलेज नई मंडी में एनसीसी अधिकारी वाजिद अली, अनिल कौशिक के नेतृत्व में एनसीसी कैडेट्स और छात्रों ने पौधे रोपे। प्रधानाचार्य विजय कुमार शर्मा ने झंडी दिखाकर पौध यात्रा को रवाना किया। चौधरी छोटू राम कॉलेज में प्राचार्य डॉ नरेश मलिक के नेतृत्व में तथा कॉलेज के चीफ प्रॉक्टर और मां शाकंभरी यूनिवर्सिटी सहारनपुर के एग्रीकल्चर संकाय के डीन के मार्गदर्शन में कॉलेज के कृषि फार्म पर 600 पौधों का रोपण किया।

जैन कन्या पाठशाला स्नातकोत्तर महाविद्यालय में राष्ट्रीय सेवा योजना इकाई व प्रबंध समिति के सचिव संजय कुमार जैन एवं प्राचार्या प्रोफेसर डॉ सीमा जैन, कार्यक्रम अधिकारी डॉ चर्चसा सैनी, प्रबंध समिति के नीरज जैन ने पौधरोपण किया। एसडी इंटर कॉलेज में प्रबंध समिति के अध्यक्ष महेंद्र कुमार गुप्ता, विजय शर्मा 120 पौधों का रोपण किया।

रोहना कलां में इंडियन पोटाश लिमिटेड रोहाना कलां की शुगर मार्के रिफाइनरी इकाई में पौधरोपण किया गया। इस दौरान अधिकारी कुलदीप सिंह, रमेश कुमार शर्मा, संजीव सिन्हा, अशोक तिवारी, मोहित चौहान आदि अधिकारी एवं कर्मचारी मौजूद रहे। शुगर कांगलवस तिवारी के यूनिट हेड सौकेश कुमार, धीरज सिंह, शिवेंशु कुमार, राहुल सिंह, विनोद कुमार, शशांक श्रीवास्तव, धर्मेंद्र सिंह आदि ने पौध रोपण किया गया।

तितावी में कृषि विज्ञान केन्द्र बघरा की ओर से बुढ़ेसा कला में पौधरोपण किया। कार्यक्रम की अध्यक्षता (सरदार वल्लभ भाई पटेल कृषि एवं प्रौद्योगिक विश्वविद्यालय मेरठ के प्रसार निदेशक डॉ. पीके सिंह ने की। सर्वोदय कन्या इंटर कॉलेज बघरा में छात्राओं ने पौधरोपण किया।

15 अगस्त को रोपे जाएंगे 4.43 लाख पौधे

जिला वन अधिकारी कन्हैया पटेल ने बताया कि जिले में 28 लाख 49 हजार 580 पौधे रोपने का लक्ष्य रखा गया है। 22 जुलाई को 24 लाख छह हजार 192 पौधे लगाए गए। अब 15 अगस्त को चार लाख 43 हजार 388 पौधे रोपे जाएंगे। इस कार्य में 26 विभागों का सहयोग लिया जा रहा है।

चेयरपर्सन ने कर्मचारियों के साथ किया पौधरोपण

बुढ़ाना। नगर पंचायत की चेयरपर्सन ममता त्यागी ने तहसील परिसर में पौधरोपण किया। नगर पंचायत की ओर से बढ़ता ग्रेड, अजीज फातिमा पब्लिक स्कूल, कुरैशी कब्रिस्तान में भी पौधे लगाए गए। इस दौरान डीसीडीएफ के पूर्व चेयरमैन सुखेन त्यागी, लिपिक सतीश कुमार, नगर पंचायत सदस्य निगम पंवार आदि मौजूद रहे। संवाद

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मुजफ्फ

तनाव के चलते युवक ने की आत्महत्या

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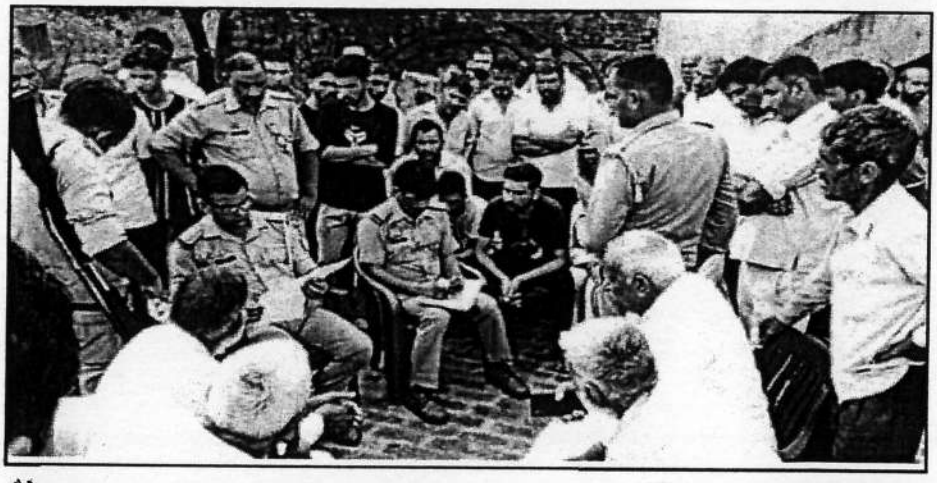

मुजफ्फरनगर (दैनिक हाक): लाखों रुपए देने के बावजूद नौकरी न लगने पर एक बेरोजगार युवक ने मायूसी में तमंचे से गोली मारकर खुदकुशी कर ली। सूचना पाकर मौके पर पहुंची पुलिस ने शव को कब्जे में लेकर पोस्टमार्टम के लिए भेज दिया है तथा मामले की जांच पड़ताल शुरू कर दी। युवक की मौत से परिजनों का रो रोकर बुरा हाल है।

भोपा थाना क्षेत्र के गांव नन्हेड़ा निवासी युवक गोविंद ने नौकरी लगवाने के नाम पर लाखों रुपये एक युवक को दे रखे थे। काफी इंतजार के बाद न ही नौकरी लगी और न पैसे वापस आए। बेरोजगार युवक कई दिनों से मानसिक तनाव में चल रहा था। रात लगभग तीन बजे 26 वर्षीय युवक गोविंद पुत्र विरेंद्र ने घर पर ही गोली मारकर आत्महत्या कर ली। फायरिंग की आवाज सुन आस-पड़ोस के लोग व परिजन उधर दौड़े पड़ा आन ले र ही र

राम श्रीवास्तव ने बताया कि पुलिस इस पूरे प्रकरण की जांच में जुटी है। उन्होंने थाना बताया कि यदि धोखाधड़ी के साक्ष्य भर मिलते हैं तो पुलिस आरोपी के विरुद्ध व में जांच कर कड़ी कार्रवाई अमल में कुमार लाएगी।

पेड़ लगाने से पर्यावरण रहता है साफ सुथरा सभी को मिलती है छाव और अच्छी हवा

मुजफ्फरनगर (दैनिक हाक): प्रदेश के मुख्यमंत्री योगी आदित्यनाथ के दिशा निर्देशों के अनुपालन में जहां प्रदेश भर में पेड़ लगाकर पौधारोपण अभियान चलाया जा रहा है जिसके चलते शुद्ध वातावरण आबोहवा को सही रखने समेत पर्यावरण और बारिश लाने में सहायक बनने वाले पेड़ों को लगाया जा रहा है ताकि आने वाले समय में पर्यावरण दूषित न हो सके साथ ही साथ लोगों के जीवन में भी हरियाली आये। तो वहीं दूसरी तरफ अगर जनपद मुजफ्फरनगर की बात करें तो यहां जिले भर में तमाम समाजिक संघटनो,संस्थायों, स्कूल कालेज,फैक्ट्रियों कारखानो आदि में भी व्रहद स्तर पर पेड़ लगाये गए है ।

जिले के तितावी थाना क्षेत्र में स्थित तितावी शुगर काम्प्लेक्स यूनिट में भी जिला प्रशासन, जिला प्रदूषण एवं श्रम विभाग के निर्देशों के अनुपालन में आज वृहद वृक्षारोपण पेड़ लगाओ पेड़ बचाओ अभियान के अंतर्गत स्वच्छ एवं स्वस्थ पर्यावरण सर्जित करने हेतु इंडियन पोटाश लिमिटेड की शुगर यूनिट तितावी शुगर कॉम्प्लेक्स तितावी में मियावाकी पद्धति द्वारा पर्यावरण की सुरक्षा हेतु वृक्षारोपण का कार्यक्रम आयोजित किया गया। इस अवसर पर तितावी शुगर कॉम्प्लेक्स तितावी के यूनिट हैड लोकेश कुमार ,धीरज सिंह विभागाध्यक्ष गन्ना शीतांसु कुमार , विभाग अध्यक्ष इंजीनियरिंग, राहुल सिंह प्रबंधक लेखा, विनोद कुमार विभागाध्यक्ष उत्पादन, शशांक श्रीवास्तव वरिष्ठ प्रबंधक मानव संसाधन विधिक ,धर्मेंद्र सिंह असिस्टेंट जनरल मैनेजर उत्पादन एवं अन्य कर्मचारियों द्वारा सागवान, शीशम ,जामुन, पिलखन आदि के 1000 पेड़ों का वृक्षारोपण किया गया।

यहां यूनिट हैड लोकेश कुमार ने सभी मिल कर्मचारियों अधिकारियों को कहा कि सभी अपने-अपने घरों, क्षेत्र, गली मोहल्लों में भी वृक्षारोपण करें पेड़ लगाएं और पर्यावरण सहित आबोहवा को भी शुद्ध रखने में अपना अहम योगदान दें।

गर्मी का सितम नहीं हो रहा कम

मुजफ्फरनगर (दैनिक हाक): आज सुबह से ही चिलचिलाती धूप के कारण लोग दिनभर पसीने से तरबतर रहे। दिन प्रतिदिन बढती गर्मी से लोग बेहाल हैं। उमसभरी गर्मी से लोगों को भारी परेशानी का सामना करना पडा। तेजधूप व गर्मी के कारण दोपहर के वक्त शहर की सडकें सूनी-सूनी पडी रही। गर्मी का असर लोगों के कारोबार पर भी नजर आया। दुकानदारों का कहना है कि गर्मी के कारण बहुत ही कम ग्राहक निकल रहे हैं।

देहात से आने वाले ग्राहकों की संख्या भी नगन्य है। कई बार तो ऐसा भी हो जाता है कि करीब आधे दिन तक बोनी भी नही हो पाती। एक और साये बन्द हैं। वहीं दूसरी और गर्मी अपने चरम पर है। भादवे के महीने में भीष्ण गर्मी होती थी। परन्तु प्रकृति मे आ रहे बडे बदलाव के कारण अब सावन माह मे भी जबरदस्त गर्मी है। इस गर्मी से इंसान ही नही बल्कि पशु-पक्षी तक बडे परेशान हैं। पशु-पक्षी धूप से बचने के लिए दिनभर इधर-उधर भटकते फिर रहे हैं।

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तितावी शुगर में हुआ पौध रोपण

Dainik Janwani

23.07.23

तितावी : शनिवार को वृहद वृक्षारोपण अभियान 2023 पेड़ लगाओ पेड़ बचाओ अभियान के अंतर्गत स्वच्छ एवं स्वस्थ पर्यावरण सर्जित करने को इंडियन पोटाश लिमिटेड की शुगर यूनिट तियावी शुगर कंपलेक्स तितावी में पौधारोपण किया गया। इस अवसर पर तितावी शुगर कंपलेक्स तितावी के यूनिट हेड लोकेश कुमार, धीरज सिंह विभागाध्यक्ष गन्ना, शीतांसु कुमार विभाग अध्यक्ष इंजीनियरिग, राहुल सिंह प्रबंधक लेखा, विनोद कुमार विभागाध्यक्ष उत्पादन, शशांक श्रीवास्तव वरिष्ठ प्रबंधक मानव संसाधन विधिक, धर्मेंद्र सिंह असिस्टेंट जनरल मैनेजर उत्पादन एवं अन्य कर्मचारियों द्वारा सागवान, शीशम, जामुन व पिलखन आदि पौधो का रोपण किया।

TRUE TYPED COPY OF ANNEXURE R-12 /51/

INDIAN POTASH LIMITED IPL

Unit- TITAWI SUGAR COMPLEX
Village & Post Office - TITAWI
Distt. : MUZAFFARNAGAR (U.P)
Phone : 0131-2486496, 2486497
FAX: 0131-2486603
CIN: U14219TN1955PLC000961

25th Sep, 2023

The Regional Officer,
UPPCB, Muzaffarnagar

Sub: - Plantation of around 5000 Plants in factory as per the directions of UPPCB and Vrahad Vraksha Ropan Maha Abhiyan-2023.

Dear Sir,

This is to bring into your kind notice that as per your directions vide your letter No.293/G-39/Vraksharopan/Muzaffarnagar/2023 dated 07.07.2023 and Vrahad Vraksha Ropan Maha Abhiyan-2023 campaign started by State & Central Government for the clean & healthy environment, we have participated in the campaign and planted more than 5000 Plants of various varieties like Sagoon, Arjun, Amrood, Jamun, Shesham, Kanji & Sahjan in our factory with recommended latest Miyawaki technique for the clean and healthy environment.

Thanking You,

Yours faithfully,

For Indian Potash Ltd. Unit Titawi Sugar Complex

Unit Head

Encl: As above

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AMAR UJALA

24.06 Lacs saplings planted in the District.

A large scale campaign was carried out for plantation in the district.

Muzaffar Nagar.

A large scale campaign was carried out for plantation in the district. 24 lacs 6 thousand 192 saplings planted in the district. The said campaign was organized by Govt. Institution, School, Colleges. State Minister namely Sh. Kapil Dev Aggarwal has planted a sapling at Kamla Nehru Vatika. The Chairman of Municipal Corporation namely Meenakashi Swaroop has planted a sapling. The Nodal Officer of Lok Adalamtn, Addl. District Judge, Shakti Singh, President of Civil Court Employee Association namely Amardeep Singh, Secretary Kapil Dev Sharma as well as other officer has participation in the sapling plantation. Dorzon of saplings planted in the court compound. At the police line, the police superintendent namely Satya Narayan Prajapat has also planted sapling.

At Deep Chand Grain Chamber, Inter College, New Mandi, the cadet & students has planted sapling dully

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headed by NCC Officer in the Wazid Ali and Anil Kaushik. The Principal launched the said team while showing the green flag. 600 sapling plantation were made at Chaudhary Chotu Ram College duly headed by Professor Dr. Naresh Malik and at Maa Shakumbari University Saharanpur duly headed by its Deen.

At Jain Kanya Pathsala, Post Graduate College, National Service Scheme, and Secretary of Management Committee Sanjay Kumar Jain, and Professor Dr. Seema Jain, the officer of progamme Dr. Varchasa Saini, Manager Committee Neerja Jain has also participated in the sapling plantation. At S.D. Inter College, the President Mahender Kumar Gupta and Vijay Sharma has made 120 saplings plantation.

At Sugar Bio Refinery of Indian Potash Ltd. Rohana Kalan sapling plantation made out. During this officer Kuldeep Singh, Ramesh Kumar Sharma, Sanjeev Sinha, R.K. Tiwari, Mohit Baliyan etc done saplings plantation.

At Titawi from the side of Agricultural Science Centre, Baghra saplings planation has been carried out at Budina

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Kalan. The said programme headed by President of Sardar Ballabh Bahi Patel Agricultural and Technical University Meerut's Director Dr. P.K. Singh. The saplings plantation carried out by the students of Sarvodya Kanya Inter College, Baghra.

[55

Dainik Hawk

23.07.23

Planting tree keeps the environment clean, everyone gets shade and good air.

That whereas in compliance with the guidelines of State Chief Minister Yogi Adityanath. A plantation campaign is being carried out across the state by planting trees, due to which trees which are helpful in keeping the climate clean and bringing rain are being planted so that the environment does not get polluted in the future and also improves the lives of people. I also got greenery. On the other hand, if we talk about Muzaffarnagar district, trees have been planted on a large scale in all the social organizations, institutions, schools, colleges, factories, factories etc. across the district.

In accordance with the instructions of the District Administration, District Pollution and Labor Department, in the Titavi Sugar Complex Unit located in the Titavi police station area of the district.

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In compliance, today under the massive tree plantation campaign, plant trees and save trees, a program of tree plantation was organized for the protection of the environment by Miyawaki method at Indian Potash Limited's Sugar Unit Titawi Sugar Complex Titawi to create a clean and healthy environment. On this occasion Titawi Sugar Complex Titawi

Unit Head Lokesh Kumar, Dheeraj Singh Head of Department Sugar Shitansu Kumar, Head of Department Engineering, Hul Singh Manager Accounts, Vinod Kumar Head of Department Production, Shashank Srivastava Senior Manager Human Resources Legal, Dharmendra Singh Assistant General Manager Production and other employees provided teak, rosewood, jamun, of Pilkhan etc. 1000 trees were planted.

That, Unit Head Lokesh Kumar asked all the mill employees and officers to plant trees in their respective homes, areas, streets and localities and make an important contribution in keeping the environment and the climate pure.

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Dainik Janwai.

23.07.2023

That Major Plantation of saplings took place in Titavi Sugar Titavi: on Saturday a Major Tree Planting Campaign 2023 Trees plant save trees campaign Clean and healthy environment under Indian potash to generate Limited's Sugar Unit Titavi Sugar Complex in Titavi Saplings were planted. At this occasion Titavi Sugar Complex Titavi Unit Head Lokesh Kumar, Dheeraj Singh Head of Department Sugarcane, Shitansu Saplings like teak, shisham, jamun and pilkhan etc were planted by Kumar, head of engineering department, Rahul Singh, manager of accounts, Vinod Kumar, head of department of production, Shashank Srivastava, senior manager of human resources, legal, Dharmendra Singh, assistant general manager of production and other employees.