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क्षेत्रीय कार्यालय

उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड, मुजफ्फरनगर

U.P. POLLUTION CONTROL BOARD, MUZAFFARNAGAR

6–बी, नई मण्डी, मुजफ्फरनगर–251001 (उ०प्र०)

सादर्भ सं० Ref. No. 575/OA-71/Chandrashekhar/2022

दिनांक Dated 10-8-2022

To,

The Registrar
National Green Tribunal
Principal Bench
New Delhi.
E-mail : judicial-ngt@gov.in

Sub.-Supplementary Report in reference to directions issued by Hon'ble National Green Tribunal in the matter of Chandrashekhar Vs State of Uttar Pradesh in O.A. No. 71/2021.

Sir,

With reference to the subject mentioned above kindly find enclosed herewith the Supplementary Report in reference to directions issued by Hon'ble National Green Tribunal on dated 15.02.2022 in the matter of Chandrashekhar Vs State of Uttar Pradesh in O.A. No. 71/2021.

Encl. : As above.

Yours faithfully

Ankit S

(Ankit Singh)
Regional Officer

Copy to :

1. Member Secretary, U.P. Pollution Control Board, Lucknow for information.
2. Shri Pradeep Mishra, Advocate, Hon'ble Supreme Court/NGT, New Delhi for perusal and necessary action.
3. Chief Law Officer, U.P. Pollution Control Board, Lucknow for information.
4. Chief Environmental Officer (Circle-3), U.P. Pollution Control Board, Lucknow for information.

Ankit S

Regional Officer

d/c

SUPPLEMENTARY REPORT
IN REFERENCE TO DIRECTIONS ISSUED BY
HON'BLE NATIONAL GREEN TRIBUNAL ON 15.02.2022
IN THE MATTER OF
CHANDRASEKHAR VS STATE OFUTTAR PRADESH
IN O.A. NO. 71/2021
REGARDING

M/S TRIVENI ENGINEERING AND INDUSTRIES LIMITED,SUGAR UNIT, VILLAGE- SHEIKHPURA, KHATAULI, DISTT. - MUZAFFARNAGAR (U.P.)

PREPARED BY JOINT COMMITTEE

Constituted by

(Hon'ble NGT Order dated 21st September, 2021)

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1.0 Supplementary Report prepared by joint committee in reference to order dated 15.02.2022 order in the matter of Chandrasekhar Vs State of Uttar Pradesh in O.A. No. 71/2021.

1.1 Background:

- Hon'ble NGT vide order dated 21.09.2021 in the matter of Chandrashekhar Vs State of Uttar Pradesh & Others in O.A. No. 71/2021 had directed as follows:

"4. ..... we direct the Joint Committee to conduct inspection when the unit is functional and furnish a report to the Tribunal on or before 15.12.2021 by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF. The report may indicate status of compliance with the Standards as prior to the season, quality of treated effluents and utilisation as per protocol/agreement with the users/farmers. It may also be mentioned whether effluents are reaching any drain leading to river/water body. Further, ground water quality be checked as per parameters relevant to the industry in question, particularly, fluoride etc."

- In compliance of the aforesaid order, a joint team of officials of CPCB Delhi, UPPCB Muzaffarnagar and District Administration inspected the industry M/s Triveni Engineering & Industries Ltd. Khatauli (hereafter referred as the unit) and joint inspection report was submitted to Hon'ble NGT on 11.01.2022. Hon'ble NGT, after considered of report, directed the following vide order dated 15.02.2022:

"The above report shows violation of the environmental norms by the Project Proponent which includes illegal disposal of untreated effluent, dilution at outlet with fresh water to conceal real status, absence of flow meter at boiler/mill house to avoid monitoring, absence of record of oil and grease stored, absence of ETP log book. The same need to be remedied in terms of the recommendations in the report. For the past violations, the Committee needs to assess and recover compensation, in accordance with law, having regard to the nature of violation, period of violation, cost of remediation and turnover of the PP. We also find that NOC for extraction of groundwater for five years is contrary to the norms with regard to the period for which such NOC can be given. Let the joint Committee give a supplementary report, a copy of which may also be served on the PP for its response, if any, before this Tribunal before the next date which may include further action taken by the State PCB, if any. The Committee may also examine the source of Selenium (SE) as found in its report. The report may be filed by 30.04.2022 with a copy to the PP, notifying it of these proceedings. Response of the PP, if any, be filed by 15.05.2022."

- Hon'ble NGT directed joint committee comprising the CPCB, UPPCB and District

Magistrate, Muzaffarnagar, U.P. to conduct inspection of M/s Triveni Engineering & Industries Ltd., at Khatauli, District Muzaffarnagar, Uttar Pradesh during operational condition and furnish a supplementary report.

2.0 Proposal for Environmental Compensation against M/s Triveni Engineering & Industries Ltd., Khatauli, Muzaffarnagar:

After consideration of report, Hon'ble NGT on 15.02.2022 directed to assess and recover environmental compensation against the unit having regard to the nature of violation, period of violation, cost of remediation and turnover of the PP. Effective part of the order in highlighted below:

"The above report shows violation of the environmental norms by the Project Proponent which includes illegal disposal of untreated effluent, dilution at outlet with fresh water to conceal real status, absence of flow meter at boiler/mill house to avoid monitoring, absence of record of oil and grease stored, absence of ETP log book. The same need to be remedied in terms of the recommendations in the report. For the past violations, the Committee needs to assess and recover compensation, in accordance with law, having regard to the nature of violation, period of violation, cost of remediation and turnover of the PP.

Environmental Compensation against the unit was calculated on the violations on the basis of no. of days of violation as per the CPCB methodology for accessing environmental compensation and also on the basis of Turn Over of the industry.

2.1 On the basis of no. of violation days (As per CPCB guidelines for calculation of Environmental Compensation):

As per the NGT order dated 21.09.2021, joint committee visited the industry on dated 08.12.2021, during visit, waste water stored in Pond No. 1 and Pond No. 2 (at the back side of press mud storage area) have shown untreated effluent characteristics beyond the prescribed limit, which is a violation of consent conditions issued by UPPCB.

As Industry started its crushing season 2021-22 on 07.11.2021, thus, assuming the day of start of crushing season as the start of violation, the E.C. may be calculated till the industry filled both the ponds completely, however the unit vide its letter dated 28.02.2022 had intimated about the complete filling of both the ponds.

Hence, Environmental Compensation may be imposed against the Sugar mill from

the date **07.11.2021 to 28.02.2022 for total 114 days @ Rs. 30,000/- per day i.e. Rs. 34,20,000/- (Thirty-Four Lac Twenty Thousand Only).**

2.2 On the basis of Turnover of industry:

In the matter of Vinit Kumar Vs Sir Shadilal Distillery & Chemical Works Pvt. Ltd. & Others, Hon'ble NGT vide order dated 11.02.2022 in O.A. No. 206/2020 stated as below:

"17. As shown by the objections of the applicant quoted earlier, the excise duty paid by the Project Proponent is more than Rs. 1500 crore per year on an average. In view of the same, the Turnover of the PP does not appear to be less than Rs.2500 crore per year. Having regard to repetitive violations of serious nature, we determine the liability of the Project Proponent @ 2% of its annual turnover i.e. Rs. 50 crores...."

The unit has intimated vide its letter dated 05.05.2022 (**Annexure-I**) that annual turnover is Rs. 900 Crores. In regard to the Hon'ble NGT order dated 11.02.2022, Environmental Compensation may be calculated as 2% of Rs. 900 crores i.e. Rs. 18.00 Crores.

UPPCB sent a letter vide letter no 176/OA No. 71/Chandrashekhar/M.Nagar/2022 dated 12.05.2022, for requesting CPCB to inform UPPCB as to which calculation shall be taken for imposition of EC on the unit. In reference to which CPCB vide letter No. PI-14011(12)/24/2021-WQM-II-HO-CPCB-HO dated 26.05.2022 informed UPPCB to take further action on imposition of Environmental Compensation as per the CPCB methodology for accessing environmental compensation. Also for ensuring compliance of Hon'ble NGT order vide dated 15.02.2022, during Video Conferencing of joint committee on dated 09.06.2022, decided to impose Environmental Compensation on the basis of No. of violation days amounting Rs. 34,20,000/-. Hence, Regional Office, UPPCB, Muzaffarnagar vide letter no 568/OA-71/Chandrashekhar/2022 Dated 06.08.2022 recommended to Head Office, UPPCB for imposition of Environmental Compensation against the unit for Rs. **34,20,000/- (Thirty-Four Lac Twenty Thousand Only.**

3.0 No Objection Certificate (NOC) for extraction of groundwater:

Hon'ble NGT, in the order dated 15.02. 2022 mentioned that the unit has been granted NOC for five years for groundwater extraction which is contrary to the norms. Effective part of the order read as:

We also find that NOC for extraction of groundwater for five years is contrary to the norms with regard to the period for which such NOC can be given. Let the joint Committee

give a supplementary report, a copy of which may also be served on the PP for its response, if any, before this Tribunal before the next date which may include further action taken by the State PCB, if any

In reference to the above order, Regional Office, UPPCB, Muzaffarnagar vide letter No. 83/O.A. No. 1 /Chandrashekhar/M.Nagar/2022 dated 22.04.2022 requested CGWA to clarify regarding the NOC issued to the unit for extraction of groundwater. Clarification from Director, U.P. Ground Water Department, Lucknow vide their letter no. 157/B.J.V./S-26 dated 05.05.2022 regarding NOC for extraction of ground water is communicated to R.O. UPPCB, Muzaffarnagar, wherein it is mentioned that as per Rule-15(3) of Chapter-4 in U.P. Ground Water Department (Management & Regulation) Manual 2020, the NOC is issued under sub rule (1), shall be valid for a period of five years (**Annexure-II**). In this concern District Magistrate (DM), Muzaffarnagar vide letter dated 27.04.2022 also informed that the NOC is approved by U.P. Ground Water Department, Muzaffarnagar.

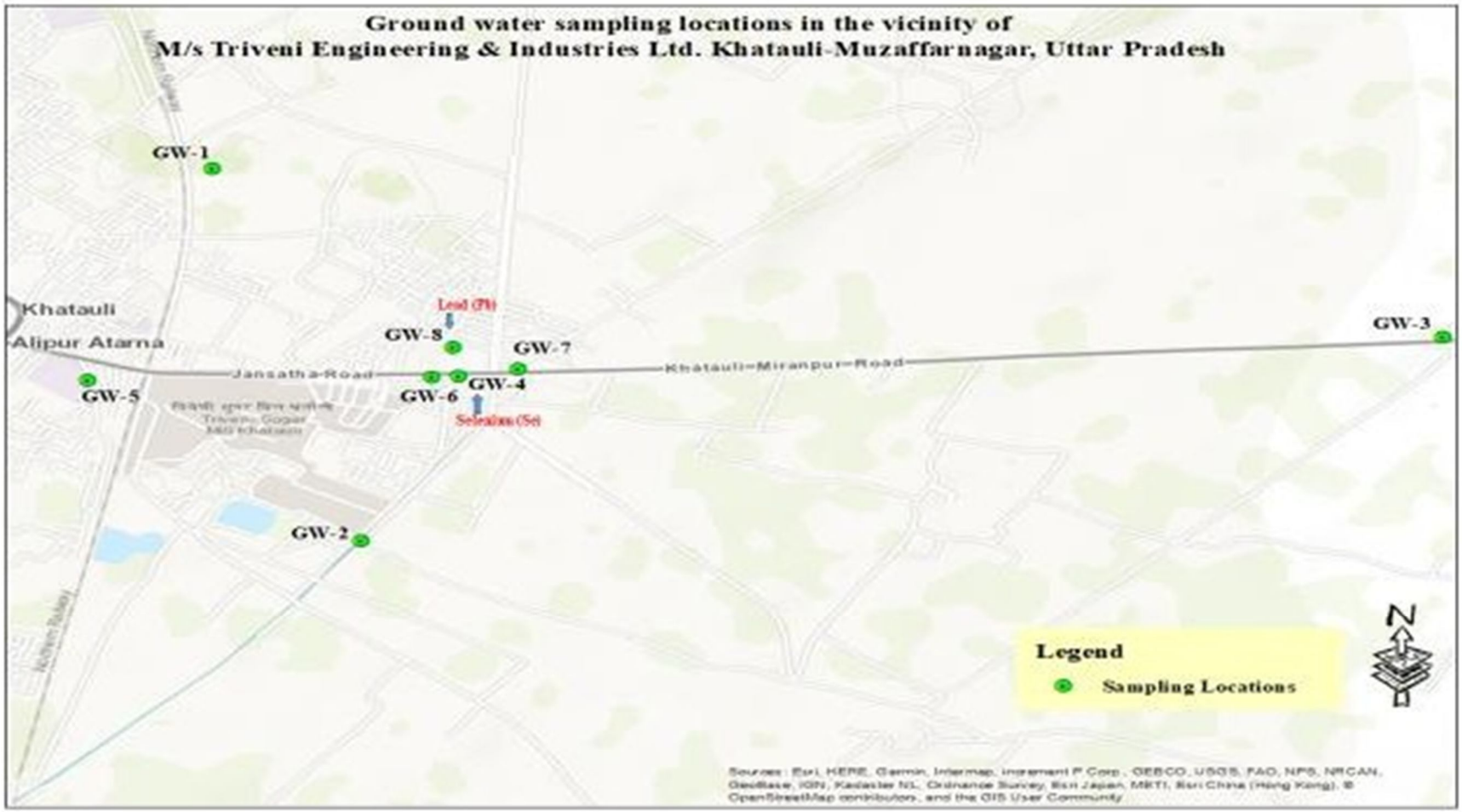
4.0 Field Study and Report in reference to presence of selenium in ground water found during inspection dated 08.12.2021:

- As mentioned earlier, the UPPCB filed the joint committee report on 11.01.2022 after conducting inspection on 08.12.2021, wherein analysis results of samples collected from bore-wellswithin unit premises and all 04 Handpumps outside the unit premises were found within permissible limit as per drinking water standard BIS IS 10500:2012 except Fe- 0.62 mg/l, 4.78 mg/l, 0.46 mg/l from Handpump outside Sugar Mill near canal, Handpump outside Sugar Mill near drain and Handpump outside near Main gate of sugar mill respectively. ***However, Selenium (Se)- 0.02 mg/l was also detected which is beyond the permissible limit i.e. 0.01 mg/l as per drinking water standard BIS IS 10500:2012 in the sample collected from Handpump near Main gate of sugar mill.***
- As per Hon'ble NGT order dated 15.02.2022, joint committee is directed to examine the source of 'Se' as mentioned in the inspection report. In this context, a meeting of joint committee was conducted on 09.06.2022 at 01:00 PM through video conference and it was decided that CPCB will nominate a member for collection of ground water samples around the area, where Selenium was found above norms in ground water as per drinking water standard BIS IS 10500:2012 during previous inspection

of the joint committee. The ground water samples shall be collected by the joint committee and theanalysis shall be analyzed in CPCB laboratory.

- In compliance to the Hon'ble NGT order dated 15.02.2022, joint committee has carried out the ground water sampling on 14.06.2022. Ground water samples were collected from the surrounding of the unit. The locations of ground water sampling

are shown on map in **Pic.-01** below:



Pic.- 01. Map showing ground water sampling locations from the surrounding of the sugar mill (M/s Triveni Engineering & Industries Ltd., Khatauli, District Muzaffarnagar, U. P.)

- Analysis of ground water samples for metal contamination including Selenium were performed by CPCB laboratory. Details of groundwater sampling locations are as follows:

Table-01. Ground water sampling locations in the vicinity of M/s Triveni Engineering & Industries Ltd., Khatauli, DistrictMuzaffarnagar, Uttar Pradesh.

S.No.	SampleCode	Sampling Location	Depth(ft)	Coordinates		Remarks
				Latitude	Longitude	
1	GW-1	Handpump outside Sugar Mill nearponding	150-200	29.2836	77.7395	Analysis results are within the acceptable limit asper drinking water standard BIS IS 10500:2012
2	GW-2	Handpump outside Sugar Mill near canal	100-150.	29.2701	77.7434	
3	GW-3	Handpump outside Sugar Mill neardrain	100-150	29.2775	77.7718	Analysis results are within the acceptable limit as per drinking water standard BIS IS 10500:2012except Iron (Fe)
4	GW-4	Handpump outside Sugar Mill nearMain gate	100-150	29.2761	77.7459	Analysis results are within the acceptable limit asper drinking water standard BIS IS 10500:2012 except Selenium (Se)
5	GW-5	Hand pump outside sugar mill near Sh. Kund Kund Jain Post Graduate Degree College, Khatauli	100-150	29.2759	77.7362	Analysis results are within the acceptable limit as per drinking water standard BIS IS 10500:2012except Iron (Fe)
6	GW-6	Hand pump outside sugar mill nearNagesh Mahadev Mandir	100-150	29.276	77.7452	
7	GW-7	Hand pump outside sugar mill nearPolice Check Post, Bhainsi, Khatauli	100-150	29.2763	77.7475	
8	GW-8	Hand pump outside sugar mill nearhouse of Sh. Gopal s/o Late Himmat Singh (H.No. 659, Geetapur/ Bhood)	100-150	29.2771	77.7458	Analysis results are within the acceptable limit as per drinking water standard BIS IS 10500:2012except Lead (Pb) & Iron (Fe)

4.1 Observations w.r.t. Ground Water analysis results:

1. Total eight (08) ground water samples were collected from the Handpumps located outside the sugar mill at various locations covering a peripheral area of 1.5 km around the unit, wherein sampling at 04 locations were repeated including the Handpump outside sugar mill near main gate, which has shown the presence of Selenium in the ground water in the joint inspection report.
2. Considering the contaminated location, 04 additional ground water samples were also collected from its surrounding area covering all possible directions for detail investigation regarding water quality in terms of heavy metal contamination in ground water.
3. Analysis results of samples collected from Handpumps from 08 locations outside the sugar mill premise are within acceptable limit i.e. 0.3 mg/l as per drinking water standard BIS IS 10500:2012 except Fe- 4.10 mg/l, 0.42 mg/l, 0.40 mg/l, 0.46 mg/l, 5.79 mg/l from Handpump Sugar Mill near drain, Hand pump outside sugar mill near Sh. Kund Kund Jain Post Graduate Degree College, Khatauli, Hand pump outside sugar mill near Nagesh Mahadev Mandir, Hand pump outside sugar mill near Police Check Post, Bhainsi, Khatauli, Hand pump outside sugar mill near house of Sh. Gopal s/o Late Himmat Singh (H.No. 659, Geetapur/ Bhood) respectively.
4. Analysis results of samples collected from Hand pump outside sugar mill near house of Sh. Gopal s/o Late Himmat Singh (H.No. 659, Geetapur/ Bhood) also shows the presence of Lead (Pb)- 0.02 mg/l, which is beyond the acceptable limit i.e. 0.01 mg/l asper drinking water standard BIS IS 10500:2012.
5. It is observed that analysis results of sample collected from Hand pump outside sugar mill near main gate (29.2760829, 77.7459228) again shows Selenium (Se)– 0.03 mg/l, which is beyond the acceptable limit i.e. 0.01 mg/l as per drinking water standard BIS IS 10500:2012. However, in earlier analysis it was 0.02 mg/l.

4.2 Comment on Selenium (Se) as per the Central Ground Water Board (CGWA):

Central Ground Water Board (Ministry of Water Resources Govt. of India)

published a report in February, 2014 entitled 'A Concept Note on Geogenic Contamination of Ground Water In India with a Special note on Nitrate', wherein all relevant information on major geogenic contaminants are reported in India. Following are mentioned in the above report regarding Selenium:

- Temperature, moisture, concentrations of water-soluble selenium, the climate, organic matter content and microbial activity determine mobility of Selenium. Agriculture not only increase the selenium content in soil; it can also increase selenium concentrations in surface water, as selenium is brought along in irrigation drainage water.
- There is evidence that selenium can accumulate in the tissues of organisms and can then be passed up through the food chain. Usually this bio-magnification of selenium starts when animals eat a lot of plants that have been absorbing large amounts of selenium. Due to irrigation run-off concentrations of selenium tend to be very high in aquatic organisms in many areas.
- Exposure to selenium in humans takes place either through food or drinking water.

4.3 General information on Selenium utility:

1. Selenium and its compounds are used in some photographic devices, gun bluing (a liquid solution used to clean the metal parts of a gun), plastics, paints, anti-dandruff shampoos, vitamin and mineral supplements, fungicides, and certain types of glass. Selenium is also used to prepare drugs and as a nutritional feed supplement for **poultry and livestock**. Sodium selenite for **animal feeds and food supplements**.
2. Selenium is used extensively in electronics, such as photocells, light meters and solar cells.
3. People that eat a lot of grains that grow near industrial sites may experience a higher exposure to selenium through food. Exposure to selenium through drinking water may be increased when selenium from hazardous waste disposals ends up in water wells.
4. Selenium levels in soils and waters increase, because selenium settles from air and selenium from waste also tends to end up in the soils of disposal sites.

5.0 Conclusion:

In view of the repeated analysis of ground water samples from the Handpump outside sugar mill near main gate (29.2760829, 77.7459228) area, it is evident that the ground water reflectshigh concentration of **Selenium** metal. To identify the cause of presence of '**Se'** in the groundwater, it is proposed that a ground water expert may be engaged to carry out the detailedstudy.

Table-02. Ground water analysis results collected from handpumps located in the surrounding of M/s Triveni Engineering & Industries Ltd.,Khatauli, District Muzaffarnagar, Uttar Pradesh.

Sampling locations → / Parameters ↓	HANDPUMPS LOCATED OUTSIDE SUGAR MILL								BIS IS 10500:2012 AcceptableLimit	BIS IS 10500:2012 (Permissible limitin absence of alternative source)
	Near ponding (70-80 ft) (29.283621, 77.739457)	Near canal (29.270085, 77.743357)	Near drain (29.277489, 77.771783)	Near main gate (29.2760829, 77.7459228)	Near Sh. Kund Kund Jain Post Graduate DegreeCollege, Khatauli (29.275900, 77.736198)	Near Nagesh Mahadev Mandir (29.276034, 77.745219)	Near Police Check Post, Bhainsi, Khatauli (29.276319, 77.747506)	Near house of Sh.Gopal s/o Late Himmat Singh (H.No. 659, Geetapur/ Bhood) (29.27709, 77.745769)		
Depth (ft.)	150-200	100-150	100-150	100-150	100-150	100-150	100-150	100-150		
As (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.01	0.05
Cd (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.003	No relaxation
Co (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	-	-
Cr (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.05	No relaxation
Cu (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.01	0.5	1.5
Fe (mg/l)	0.10	0.91	**4.10**	0.25	**0.42**	**0.40**	**0.46**	**5.79**	0.3	No relaxation
Mn (mg/l)	BDL	0.09	0.06	0.10	0.13	0.14	0.24	0.16	0.1	0.3
Ni (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.02	No relaxation
Pb (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	**0.02**	0.01	No relaxation
Sb (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	-	-
Se (mg/l)	BDL	BDL	BDL	**0.03**	BDL	BDL	BDL	BDL	0.01	No relaxation
V (mg/l)	BDL	BDL	BDL	0.03	BDL	BDL	BDL	BDL	-	-
Zn (mg/l)	0.35	0.06	0.49	0.11	0.34	0.03	0.03	0.68	05	15

6.0 Photographs:

Pic.- 01. Handpump outside sugar mill near main gate (29.2760829, 77.7459228)

Pic.- 02. Hand pump outside sugar mill near drain (29.277489, 77.771783)

Pic.- 03. Hand pump outside sugar mill near canal (29.270085, 77.743357)

Pic.- 04. Hand pump outside sugar mill near ponding (29.283621, 77.739457)

Pic.- 05. Hand pump outside sugar mill near Sh. Kund Kund Jain Post Graduate DegreeCollege, Khatauli (29.275900, 77.736198)

Pic.- 06. Hand pump outside sugar mill near Nagesh Mahadev Mandir (29.276034,77.745219)

	
Pic.- 07. Hand pump outside sugar mill nearPolice Check Post, Bhainsi, Khatauli (29.276319, 77.747506)	Pic.- 08. Hand pump outside sugar mill nearhouse of Sh. Gopal s/o Late Himmat Singh (H.No. 659, Geetapur/ Bhood) (29.27709, 77.745769)

7.0 Signature of Joint Committee:

S.No.	Name of the member	Designation	Signature
1.	Shri Ankit Singh	Regional Officer, Muzaffarnagar,UPPCB	
2.	Ms. Reena Satavan	Sc.- 'D', Central Pollution Control Board, Delhi	
3.	Shri Jeet Singh Rai	SDM, Khatauli, Muzaffarnagar,U.P.	