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BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,
WESTERN ZONE BENCH, PUNE
Original Application No.143/2017(WZ)

Kushabapu Pawar & Anr. ...Applicants

v/s

M/s.Padmashree Dr.Viththalrao Vikhe Patil
Sahakari Sakhar Karkhana Ltd.
...Respondents

Affidavit on behalf of the Respondent No. 2 - i.e. Maharashtra Pollution Control Board

I, Raju Vasave, age 46 Years, occupation - service, the Sub-Regional Officer of the Maharashtra Pollution Control Board at Ahmednagar, having my office at Savitribai Fule Vayapari Sankul, 1st Floor, Hall No.2 & 3, Near T.V. Center, Savedi, Ahmednagar-414 003, do hereby state on solemn affirmation as under:

1. I say and submit that this Hon'ble NGT vide order dtd. 8/11/2017 directed the Central Pollution Control Board and Maharashtra Pollution Control Board to jointly visit the land bearing Gat Nos.511 & 512, Village : Tambhere, Tal: Rahuri, Dist: Ahmednagar and collect solid & ground water samples and assess the damage caused thereon on account of release of spent wash, and further recommend the methodology for restoration of lands and quality of ground water and verify the damage caused in terms of money required for restoration within a period of two months.

NATIONAL GREEN TRIBUNAL
PUNE
FILED
Date 20.02.18

20-2-18

NOTARY
16/2/2018
No 4031
S. GAUTAMEE
G KULKARNI
ADVOCATE &
NOTARY
GOVT. OF INDIA

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2. I say and submit that in compliance of the order dtd. 8/11/2017 passed by this Hon'ble Tribunal, officials of the Central Pollution Control Board and the Maharashtra Pollution Control Board jointly visited to the aforesaid lands on 28/12/2017. The recommendations and conclusion are as under :

A. <u>Recommendations</u> :

i. Though the groundwater samples collected within the industry premises are not showing any contamination, the industry is required to take appropriate measures for the treatment storage and disposal of distillery effluent (spent wash), such as construction of pucca lagoons in place of earthen lagoons to avoid any possibility of contamination of groundwater in lagoons;

ii. The industry should control the leakages, spillages and accumulation of effluent within the premises on top priority.

B. <u>Conclusion</u> :

i. It can be concluded from the above visit to the complainant agriculture lands and based on the analysis results of the collected groundwater from the agriculture lands that there is no contamination is observed in and around the Gut No.511 & 512 and the results of soil

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samples are awaited and the same will be submitted later on.

ii. However, the industry needs to undertake proper measures for spent wash collection, treatment, storage and disposal, such as construction of pucca lagoons in place of earthen lagoons so as to avoid any ground water contamination.

A copy of the detailed joint visit report dtd 28/12/2017 is enclosed herewith and marked as an **Annexure – I.**

3. I further say and submit that during the course of visit, 9 soil samples were collected & sent to the Regional Laboratory, MPCB, Nashik vide letter dtd. 29/12/2017. The analysis results of said soil samples are awaited.

Solemnly affirmed before me by Raju Vasave who is identified before me by Anil Harichaudhari whom I personally know

Solemnly affirmed on this 16th Day of February, 2018 at Ahmednagar.

NOTED & REGISTERED AT S.No GGK 396/2018

For & on behalf of Respondent NO.2
Maharashtra Pollution Control Board

BEFORE ME
MRS. GAUTAMEE G KULKARNI
NOTARY
GOVERNMENT OF INDIA
16 FEB 2018

(Raju Vasave) 16/02/2018
Sub-Regional Officer-Ahmednagar

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Annexure- I

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Visit report on compliance of order passed by Hon'ble NGT Pune in the matter of Kushubapu Pawar & Anr Vs M/s Padmashree Dr.Viththalrao Vikhe Patil Sahakari Sakhar Karkhana, Pravaranagar, Tal. Rahata, Dist. Ahmednagar Maharashtra.

1.0 Background:

Hon'ble NGT Western bench Pune passed an order in Original Application 143/2017(WZ) Kushabapu Pawar & Anr V/s Padmashree Dr.Viththalrao Vikhe Patil Sahakari Sakhar Karkhana Ors dated 8th November 2017 to assess the damage caused to the land (Gut No.512) of complainant due to the discharge of spent wash by M/s Padamshree Dr. Vithalarao Vikhe Patil Sahakari Shakar Kharkhana, Rahuri, Dist.Ahmednagar, and for restitution of environment due to release of unlawful spillage of spent wash by Respondent 1 Sugar Factory.

The order further directed Central Pollution Control Board (CPCB) and Maharashtra Pollution Control Board (MPCB) to jointly visit the said lands collect soil and ground water samples and assess the damage caused here on account of release of spent wash, and further recommend methodology for restoration of lands and quality of groundwater, and verify the damage caused in terms of money required for restoration.

In this regard, a team of officials from Maharashtra Pollution Control Board (MPCB) & Central Pollution Control Board (CPCB) visited jointly on 28th December 2017.

The complainant's representative Shri Dadasaheb Pawar & the representatives from the industry were also present during the visit. Following officials of CPCB & MPCB have carried out the inspection and monitoring.

I. Officials from CPCB, RD (West), Vadodara
   1. Dr.D.Brahmaiah, Scientist D
   2. Dr. Nripendra Semwal, Scientist B
   3. Shri Pawan Detwal, JRF

II. Officials from MPCB, Regional Office, Ahmednagar and Nashik
   1. Shri R.R.Wasave, SRO, Ahmednagar
   2. Shri S.A. Redasani, FO, RO, Nashik
   3. Shri R.P. Suryawanshi, FO, SRO Office, Ahmednagar
   4. Dr. P.D.Khedkikar, JSO, Regional Lab. Nashik

III. Complainant:
   1. Shri Dadasaheb Pawar, Vill. Tabhure

IV. Representatives from industry M/s Padmashree Dr.Viththalrao Vikhe Patil Sahakari Sakhar Karkhana, Pravaranagar, Tal. Rahata, Dist. Ahmednagar.

   1. Shri Tobekar, MD
   2. Shri Prabhakar R Balwade, HOD, Bio-gas plant
   3. Shri Kadekar, I/C ETP (Sugar)

2.0 Approach:

The team at the outset took the over view of wastewater management at the industry M/s Padmashree Dr.Viththalrao Vikhe Patil Sahakari Sakhar Karkhana which is around 8-10 Kilometres of aerial distance and by Road 15 Kilometres from the agricultural land bearing Gut No. 511 & 512.

After visiting the industry, the team proceeded to complainant's agriculture land site & collected soil samples from Gut No.510, 511, 512, 513 & ground water samples from Gut No.505 and Gut No. 238 (opposite to Gut No.505).

The ground water samples (02Nos.) were collected from the nearest location at Gut No.505 to the Gut No.511 & 512 and one sample from Gut No.238 which is located opposite to the Gut No.505, as there is no ground water sampling location in the Gut 512. In Gut No. 511 there was one bore well (towards Thambore to Kolar road), but during the visit the sample could not be collected as there was no power.

The copy of onsite visit report regarding the sampling carried out at complainants agricultural lands is attached as **Annexure-A.**

3.0 Monitoring at the Agriculture lands:

The joint inspection team collected soil samples from 09 locations (04 samples from Gut No. 511, 03 Samples from Gut No. 512 and 01 Sample each from Gut No. 510 and 513 respectively) and 04 water samples, 01 from small pond (accumulated water) located at the end of Gut No. 511 & 512 and 03 ground water samples from open wells situated in Gut No. 505 and opposite side of Gut No. 505 across Thambore Kolar road and Gut No.238.

The ground water sampling locations are situated within 500 meter periphery of Gut No. 511 and 512 i.e. the complainant land. The ground water where samples collected is used for irrigation in the nearby agricultural lands.

The details of soil and groundwater samples collected to assess the damage caused there on account of alleged release of spent wash is as under:

Sr. No	Gut No	Land Owned by	Sample details and onsite observation	Remarks
	I. Details of the soil samples collected			
1	510	Mr.Tukram SakharamPawar	Soil sample at the depth of 1 foot. No smell or no traces of Spent wash observed.	Located adjacent (South) to the land of Mr Kushabapu RangnathPawar gut no 511.
2	511	Mr. Kushabapu Rangnath Pawar	Soil sample at the depth of 1 foot. No smell or no traces of Spent wash observed.	Located adjacent (South) to the land of Mr Kushabapu Rangnath Pawar gut no 511
3	511	Mr. Kushabapu Rangnath Pawar	Soil sample at the depth of 1 foot. No smell or no traces of Spent wash	Located adjacent (South) to the land of Mr Kushabapu RangnathPawar gut no 511

			observed.	
4	511	Mr. Kushabapu Rangnath Pawar	Soil sample) at the depth of 1 foot. No smell or no traces of Spent wash observed.	Located adjacent (South) to the land of Mr Kushabapu RangnathPawar gut no 511
5	511	Mr. Kushabapu Rangnath Pawar	Soil sample at the depth of 1 foot. No smell or no traces of Spent wash observed.	Located adjacent (South) to the land of Mr Kushabapu Rangnath Pawar gut no 511
6.	512	Mrs. Lata Ramnath Pawar	Soil sample at the depth of 1 foot. No smell or no traces of Spent wash observed.	Located adjacent (North) to the land of Mr Kushabapu RangnathPawar gut no 511.
7	512/1	Mrs. Lata Ramnath Pawar	Soil sample at the depth of 1 foot. No smell or no traces of Spent wash observed.	Located adjacent (North) to the land of Mr Kushabapu RangnathPawar gut no 511.
8.	512/2	Mrs. Lata Ramnath Pawar	Soil sample at the depth of 1 foot. No smell or no traces of Spent wash observed.	Located adjacent (North) to the land of Mr Kushabapu Rangnath Pawar gut no 511.
9.	513	Mrs.Meena Dadasaheb Pawar	Soil sample at the depth of 1 foot. No smell or no traces of Spent wash observed.	Located adjacent (North) to the land of Mr Kushabapu Rangnath Pawar gut no 511.
	II . Details of small pond (accumulated water) in samples collected			
1.	511	Mr. Kushabapu Rangnath Pawar	Accumulated water in small pond. No smell or colour.	Located adjacent (South) to the land of Mr Kushabapu RangnathPawar gut no 511
	III . Details of the ground water samples Collected			
1.	505	Mr Indrabhan Pawar	Open Well Water (GW1), No smell or colour.	Located North-West to the land of Mr Kushabapu Rangnath Pawar gut no 511.
2.	505	Mr.Dhyaneshwar Pawar	Well Water (GW2), No smell or colour.	Located North-West to the land of Mr Kushabapu Rangnath Pawar gut no 511.
3.	238	Mr.Bhanudas S Musmade	Well Water (GW3), No smell or colour.	Located South-West to the land of Mr Kushabapu Rangnath Pawar gut no 511.

To share the sample analysis work load all the soil samples (09Nos.) and 01 surface water sample collected from the small pond near Gut No.511 &512 are analysed by the MPCB Regional Laboratory at Nashik. The results of soil analysis are awaited from MPCB.

The groundwater samples (03Nos. (GW-4,5,6)) collected from the complainants agricultural lands by the joint inspection team are analysed at Laboratory of Regional Directorate (West), CPCB, Vadodara for various physicochemical parameters, the measured values are presented as below:

3.1 Ground Water Samples collected at Gut No. 505, 238 near complainant land (Gut No.511 & 512):

1. Ground Water sampling Location-1: Open well (GW-4) at Gut No. 505.

Parameter	Concentration (mg /lit.) except pH	Parameter	Concentration (mg /lit.)	Parameter	Concentration (mg /lit.)
pH	7.59	Cl^-	279.6	Na^+	160.2
Conductivity	1690	SO_4	174.66	K^+	1.1
Colour	BDL	F^-	0.735	SAR	2.869
TDS	1142	T. Alkalinity	288	%Na	37.09
COD	17.6	T. Hardness	590	Boron	0.289
BOD	0.50	Ca^{+2}	64	NO_2-N	0.035
NH3-N	0.08	Mg^{+2}	44	NO_3-N	0.132
PO4-P	0.011				

2. Ground Water sampling Location-2: Open well (GW-5) at Gut No. 505.

Parameter	Concentration (mg/lit.) except pH	Parameter	Concentration (mg/lit.)	Parameter	Concentration (mg/lit.)
pH	7.45	Cl^-	404.9	Na^+	146.4
Conductivity	1730	SO_4	189.08	K^+	1.3
Colour	BDL	F^-	0.689	SAR	2.408
TDS	1381	T. Alkalinity	304	%Na	31.23
COD	18.1	T. Hardness	700	Boron	0.289
BOD	BDL	Ca^{+2}	156	NO_2-N	0.007
NH3-N	0.59	Mg^{+2}	75	NO_3-N	0.114
PO4-P	BDL				

3. Ground Water sampling Location-3: Open well (GW-6), opposite to Gut No. 505 (Gut 238), across Tambore-Kolar road.

Parameter	Concentration (mg/lit.) except pH	Parameter	Concentration (mg/lit.)	Parameter	Concentration (mg/lit.)
pH	7.62	Cl^-	366.4	Na^+	129.2
Conductivity	1590	SO_4	149.66	K^+	2.7
Colour	BDL	F^-	0.679	SAR	2.189
TDS	1385	T. Alkalinity	260	%Na	29.76
COD	19.9	T. Hardness	660	Boron	0.156
BOD	1.6	Ca^{+2}	152	NO_2-N	0.0732
NH3-N	0.48	Mg^{+2}	68	NO_3-N	0.026
PO4-P	BDL				

The analysis results of the ground water samples collected during the visit do not indicate any contamination. The relevant parameters (EC/Total Salts Concentration, SAR, Boron) stipulated in IS 11624-1986 (Reaffirmed 2009) Indian Standard Guidelines for the Quality of Irrigation Waters are observed to be within the stipulated norms.

4. Surface water sampling location small pond (accumulated water) at Farm Lake water Gut no 512.

Parameter	Concentration	Parameter	Concentration	Parameter	Concentration
PH	8.68	Chromium	BDL	Boron	0.08
Suspended Solids	24	Nickel	0.076	Copper	BDL
TDS	1476	Fluoride	BDL	TRC	NIL
Chloride	570	Phenol	BDL	Magnesium	122
Sulphates	180	Colour	Colourless	Sulphide	BDL
Oil & Grease	BDL	Odour	Odourless	Alkalinity	32
Iorn	0.446	Ammonia	1.3	T Hardness	370
Zinc	0.015	Detergent	0.365	Cadmium	0.028
Mercury	BDL	Alphe BHC	BDL	Alpha Endosulphan	BDL
Sodium	56	Beta BHC	BDL	Beta Endosulphan	BDL
Calcium	248	Gama BHC	BDL	Chloropyriphos	BDL

The analysis results of the surface water samples collected during the visit do not indicate any contamination. The relevant parameters (Total Salts Concentration, Boron) stipulated in IS 11624-1986 (Reaffirmed 2009) Indian Standard Guidelines for the Quality of Irrigation Waters are observed to be within the stipulated norms.

4.0 Visit to M/s Padmashree Dr.Viththalrao Vikhe Patil Sahakari Sakhar Karkhana, Pravaranagar, Tal. Rahata, Dist. Ahmednagar.

M/s Padmashree Dr.Viththalrao Vikhe Patil Sahakari Sakhar Karkhana, Pravaranagar, Tal. Rahata, Dist. Ahmednagar was established during 1943 sugar unit (cap.6000TCD) and 1985 distillery unit (92KLPD). The team visited the industry to observe the waste water management. The industry comprises of sugar and distillery units within same premises.

4.1 Status of Consent:

The CC&A for Sugar unit is valid up to 31.07.2018 and for Distillery unit on 31.08.2017 (Annexure – B). As per CC&A the Distillery unit is engaged in manufacturing of Rectified Sprit, Country Liquor, IMFL, Absolute Alcohol and Trichloro Ethanol. As reported, the industry applied for renewal of consent to MPCB and it is under process.

4.2 Effluent Treatment Plant of Sugar Unit:

The industry is having a separate ETP for Sugar unit with primary, secondary and territory treatment systems. The treated wastewater from this ETP is used for irrigation in the nearby agricultural land. It is informed that the said agricultural land belongs to the industry. Samples were collected from Inlet and outlet of ETP. During visit some wastewater having moderately acidic pH (3-4) was flowing from the sides of ETP and terminating in open land near the ETP. The team has collected sample of wastewater from the drain for its characterization.

4.3 Management of Spent wash:

The industry has provided effluent treatment to treat the effluent generated from the distillery unit which comprises of collection cum neutralisation tank, plate heat exchanger, biomethenation units (4Nos. digesters), RO Plant, MEE. During visit the RO, MEE plants were not in operation. As reported, the RO was not operational due to some maintenance work and the MEE is commissioned but yet to make operational.

Presently, after biomethenation the spent wash is utilised in the bio compost plant (12 acers area) along with press mud to make the compost. During the visit spent wash sprinkling on compost yard is observed. The Compost yard is having impervious cement lining with 02 leachate collection sumps on two opposite corners. Webcam is installed in this area which is connected to CPCB central server.

Gas generated from digesters is used in boiler (10Ton). Gas generation record is maintained in a record book. However, during visit the gas was observed flaring through open burners.

The unit is storing the spent wash in 08 lagoons, in which 06 lagoons are earthen and 02 are pucca lagoons. During visit spent wash discharge into earthen lagoons was observed. One composite spent wash sample from earthen lagoons was collected. However, No discharge of spent wash found from the premises.

The team has collected 03 ground water samples from the industry premises i.e. near ETP, near civil office worker entry gate and near Mahatma Gandhi Mahavidyalaya. Google maps showing sampling locations are attached as Annexure -D. The analysis results are given in the table below.

4.5 Results of the Ground Water Samples collected within Industry premises

1. Ground Water Sampling Location-1 (GW-1): Bore well near ETP of Sugar Unit of Industry

Parameter	Concentration (mg /lit.) except pH	Parameter	Concentration (mg /lit.)	Parameter	Concentration (mg /lit.)
pH	7.63	Cl^-	26.03	Na^+	27.4
Conductivity	610	SO_4	24.28	K^+	0.5
Colour	40	F^-	0.426	SAR	0.693
TDS	440	T. Alkalinity	294	%Na	16.74
COD	26.5	T. Hardness	296	Boron	BDL
BOD	0.60	Ca^{+2}	90	NO_2-N	0.0014

NH3-N	0.33	Mg^{+2}	18	NO_3-N	0.097
PO4-P	BDL				

2. Ground Water Sampling Location-2 (GW-2): Bore well near Civil Office workers entry gate in the premises of Industry

Parameter	Concentration (mg /lit.) except pH	Parameter	Concentration (mg /lit.)	Parameter	Concentration (mg /lit.)
pH	7.54	Cl^-	26.03	Na^+	25.3
Conductivity	520	SO_4	39.29	K^+	0.4
Colour	BDL	F^-	0.322	SAR	0.699
TDS	382	T. Alkalinity	218	%Na	18.14
COD	24.3	T. Hardness	248	Boron	BDL
BOD	BDL	Ca^{+2}	69	NO_2-N	0.0011
NH3-N	0.37	Mg^{+2}	19	NO_3-N	0.167
PO4-P	0.031				

3. Ground Water Sampling Location-3 (GW-3): Open well in Gut No271 Near Mahatma Gandhi Mahavidyalay

Parameter	Concentration (mg /lit.) except pH	Parameter	Concentration (mg /lit.)	Parameter	Concentration (mg /lit.)
pH	7.28	Cl^-	102.2	Na^+	75.4
Conductivity	1100	SO_4	122.25	K^+	1.0
Colour	15	F^-	0.699	SAR	1.547
TDS	798	T. Alkalinity	382	%Na	26.67
COD	18.1	T. Hardness	450	Boron	BDL
BOD	1.7	Ca^{+2}	128	NO_2-N	0.0067
NH3-N	0.58	Mg^{+2}	32	NO_3-N	0.079
PO4-P	0.008				

The analysis results of the ground water samples collected during the visit do not indicate any ground water contamination. The relevant parameters (EC/Total Salts Concentration, SAR, Boron) stipulated in IS 11624-1986 (Reaffirmed 2009) Indian Standard Guidelines for the Quality of Irrigation Waters are observed to be within the stipulated norms.

Some of the photographs taken during the visit is attached at Annexure - E

5.0 Other observations:

- During visit wastewater (having sewage texture) was found stored in earthen pit before ETP of sugar unit. Sample was collected from this storage pit for characterization.
- Wastewater accumulated on land was observed on some other locations within factory premises and HDPE pipe line with valve control opening carrying wastewater within industry premises was found. When valve was opened wastewater discharged from pipe on open land area was observed. The wastewater sample was collected from this pipeline.

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- The overall housekeeping and spent wash management and handling are observed to be not satisfactory.
- The industry also provided online monitoring system (OCEMS) in the ETP provided to sugar unit, but during visit it was observed not working properly.
- Flow meter was provided at the spent wash receiving ponds, but same was not operational.

6. Recommendations:

- Though the ground water samples collected within the industry premises are not showing any contamination however, the industry needs to take appropriate measures for the treatment, storage and disposal of distillery effluent (spent wash), such as construction of pucca lagoons in place of earthen lagoons to avoid any possibility of contamination of the ground water in lagoons.
- The industry should control the leakages, spillages and accumulation of effluent within the premises on priority.

7.0 Conclusion:

It can be concluded from the above visit to the complainant agriculture lands and based on the analysis results of the collected groundwater from the agriculture lands that there is no contamination is observed in and around the Gut No. 511 & 512 and the results of soil samples are awaited and the same will be submitted later on.

However, the industry needs to undertake proper measures for spent wash collection, treatment, storage and disposal), such as construction of pucca lagoons in place of earthen lagoons so as to avoid any ground water contamination.

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(R. R. Vasave)
SRO, Ahmednagar
MPCB.

(D. Brahmanath)
Sc. D
CPCB, ZO(WI)
Vadodara