

**Joint Visit Report in Compliance of Order Passed by Hon'ble NGT in the Matter O.A.
No. 910 / 2019 Related with Air and Ground Water Pollution in Vapi, Gujarat**

1. BACKGROUND:

Hon'ble NGT (Principle Bench, Delhi) passed an order on 31.10.2019 in the matter of Yunus Daud Shaikh vs. State of Gujarat (OA No 910 of 2019). The matter is related to air pollution in Vapi due to burning of waste and scrap from paper mills in the night and chemical contamination of ground water in Vapi area. In the said order, Central Pollution Control Board (CPCB) and Gujarat Pollution Control Board (GPCB) were jointly asked to furnish a factual and action taken report in the matter. GPCB was appointed as Nodal Agency for co-ordination and compliance.

In accordance with the order, following officials of GPCB and CPCB jointly visited four prominent paper mills in Vapi GIDC to observe the waste management practices adopted by these units and carried out monitoring of ground water around GIDC Vapi during 13.11.2019 to 15.11.2019. The following team along with the complainant also surveyed GIDC Vapi and adjoining areas during night time on 13.11.2019:

1. Dr. N. Semwal, Scientist-B - Regional Directorate (West), CPCB, Vadodara
2. Shri Mayank Nimbark, Junior Lab Assistant - Regional Directorate (West), CPCB, Vadodara
3. Shri Jaimin Rana, AEE, GPCB Regional Office, Vapi

Observations and findings are discussed in subsequent paragraphs.

2. STATUS OF WASTE MANAGEMENT IN PAPER MILLS:

Four paper mills situated in GIDC Vapi were visited to assess the status of waste management. Name of Agrawal Paper Mill group is specifically mentioned in the Hon'ble NGT's order and therefore out of four units visited, two units belongs to M/s N.R. Agarwal Industries Ltd. (Unit I & II) and two other units are, M/s Maheshwari Logistics Limited – Paper Division and M/s Shah Paper Mills Ltd. (Unit III). The names of other two units i.e. M/s Maheshwari Logistics Limited and M/s Shah Paper Mills Ltd. were suggested by the complainant. All four units are prominent paper mills in the Vapi area. Industry wise observations with focus on waste management are as follows;

2.1 M/s N. R. Agarwal Industries Ltd. (Unit-I), Phase – II, GIDC Vapi

The unit was operational during the visit with CC&A valid till 31.12.2022. Mr. Joshua Madhukar, Sr. Vice President of the unit was present during the visit and provided required information. The unit is engaged in manufacturing of Duplex Paper Board by using waste

paper as raw material. The consented production capacity of the industry is 8000 MT/Month and as per the record provided, the unit manufactured average 7842 MT/Month of Duplex Board by consuming average 8288 MT/Month raw material (waste paper) during November 2018 to October 2019.

The manufacturing process comprises following major steps:

Pulping → Dump Chest (1 hour retention) → Screening/ cleaning → Refining (homogenization of mass) → Chemical Treatment → Pressing → Drying → Sheeting

The entire wastewater generated from the process is collected in a re-use tank. Most part of the wastewater from this tank is re-used in the process (mainly for pulping) and excess wastewater is treated in ETP and finally discharged to CETP Vapi for further treatment. Reportedly, the sludge from the re-use tank and ETP is sent back to the process owing to fibrous material. As per CC&A, ETP waste should be disposed in CHWTSDF Vapi.

The plastic waste separated from the process is sent to the cement units for co-processing. The industry is having agreement with M/s Ultratech Cement (four different units situated in Gujarat, Rajasthan and Madhya Pradesh) for co-processing of plastic waste. As per record, the unit has sent average 1539 MT/Month of plastic waste for co-processing during November 2018 to October 2019. Reportedly, the imported raw material comprises 2 to 2.5 % plastics, whereas Indian raw material comprises about 5% plastics.

The unit has obtained Consent To Establish (CTE) on 22.07.2019 from GPCB for installing one 8 TPH boiler wherein Non-recyclable plastic waste (38MT/Day) and LDO (1.44 KL/Day) shall be used as fuel and thus major part of the plastic waste will be utilized in captive boiler only **(Copy of CTE is enclosed for reference as Annexure-1).**

Conclusion:

It can be concluded from the above observations that the unit is generating the plastic waste from its manufacturing process which is disposed through co-processing in cement unit. Further, the unit has obtained Consent to Establish from GPCB to establish a boiler wherein Non-recyclable plastic waste shall be used as fuel. The sludge generated from the re-use collection tank and ETP is again used in the pulping process.

2.2 M/s N. R. Agarwal Industries Ltd. (Unit-2), Phase -I, GIDC Vapi

The unit was not operational during the visit due to some maintenance issue. The CC&A issued on 14.12.2016 is valid till 30.06.2021. Mr. Joshua Madhukar, Sr. Vice President of the unit was present during the visit and provided required information. The unit is engaged in manufacturing of News Print Paper and Writing & Printing Paper by using waste paper as raw material. The consented production capacity of the industry is 3000 MT/Month and as per the record provided, the unit manufactured average 2953 MT/Month by consuming average 3691 MT/Month raw material (waste paper) during November 2018 to October 2019.

The manufacturing process comprises following major steps:

Pulping (Caustic + soap noodles + silicates) → Cleaning (two stage screening) → Deinking → Thickener → Disperser (homogenization) → Heating Screw (95 -98°C, bleaching chemicals) → Cleaning → Wire Press → Dryer → Sheeting

The sludge generated from the Deinking process (Black Mava as named by the complainant) is presently stored within the unit premises. As per the industry record, 3405 MT of Deinking sludge is generated during November 2018 to October 2019.

The ministry of Environment, Forest & Climate Change, Government of India, New Delhi vide their letter No. F. No. 23/38/2017-HSM dated 08/08/2017 declared Deinking sludge as Non-hazardous (**Letter enclosed as Annexure – 2**). Based on this, GPCB has issued letter vide no. GPCB/CCA-VSD-121(3)/ID: 23954 dated 01.09.2018 to the unit for declaring Deinking sludge as Non-hazardous (**Letter enclosed as Annexure – 3**). It is informed that the unit has applied in GPCB for permission to use Deinking sludge as fuel in the boiler. It is observed during visit that huge quantity (reportedly about 3000MT) of deinking sludge is being stored in the industry premises (Photograph shown below).



Deinking sludge stored in the premises



Close view of Deinking sludge

The entire wastewater generated from the process is collected in a tank. Most part of the wastewater from this tank is re-used in the process (mainly for pulping) and excess wastewater is treated in ETP and finally discharged to CETP Vapi for further treatment. Reportedly, the sludge from the re-use tank and ETP is sent back to the process owing to fibrous material. As per record, the unit has generated 122 MT ETP sludge during November 2018 to October 2019. As per CC&A, ETP waste should be disposed in CHWTSDF Vapi.

The plastic waste which is separated from the process is sent to the cement units for co-processing. The industry is having agreement with M/s Ultratech Cement (four different units situated in Gujarat, Rajasthan and Madhya Pradesh) for co-processing of plastic waste. As per record, the unit has sent average 589 MT / Month of plastic waste for co-processing during November 2018 to October 2019. It is informed that the imported raw material comprises 2 to 2.5 % plastics, whereas Indian raw material comprises 5% plastics.

Conclusion:

It is concluded from the above observations that the unit is generating substantial quantity of Deinking sludge from the process. Deinking sludge has been removed from the category of hazardous waste by Ministry of Environment, Forest & Climate Change, Government of India, New Delhi, vide letter No. F. No. 23/38/2017-HSM dated 08/08/2017. The industry intends to use the Deinking sludge as fuel for waste to energy and it is informed that the unit has applied for permission in GPCB.

2.3 M/s Shah Paper Mills Ltd. (Unit No. 3), GIDC Estate, Vapi

The unit was operational during the visit. The CC&A issued on 26.10.2019 is valid till 30.06.2024. Mr. Jayant Biswas, General Manager (Production) of the unit was present during the visit and provided necessary information.

The unit is engaged in manufacturing of M.G. Kraft Paper or News Print Paper and Writing & Printing Paper by using waste paper as raw material. The consented production capacity of the industry is 4000 MT/Month Kraft Paper or 3750 MT/Month News Print Paper and Writing & Printing Paper and as per the record provided, the unit manufactured average 3129 MT/Month News Print Paper and Writing & Printing Paper by using average 4215 MT/Month raw material during January 2019 to October 2019.

The manufacturing process comprises following major steps:

Pulping (Caustic + soap noodles + silicates) → Dump Chest (1 hour retention period) → Turbo Screen (6 mm, remove plastic waste) → High Density Cleaner (remove heavy waste particles) → Fine Screens → Deinking Unit → Thickener → Disperser (homogenization) → Bleach Tower → 2nd stage Deinking → Thickening → Heating Screw (95 -98°C, bleaching chemicals) → Cleaning → Wire Press → Dryer → Sheeting

The wastewater generated from the above process is mostly recycled back in the process (mainly pulping) and excess wastewater is treated in ETP and discharged to CETP Vapi for further treatment. The sludge generated from ETP is sent to CHWTSDF for disposal. As per record, the unit has disposed 16.9 MT of ETP waste to CHWTSDF.

The Deinking sludge and waste recovered from High Density Cleaner is given to actual users i.e. Card Board manufacturers. As per the record provided, the unit has disposed average 454 MT/Month Deinking sludge to the actual users namely M/s Hari Om Paper & Board Mills, Motapondha, Valsad and M/s. Matoshree Board Mills, Namdha Village, Valsad.

As per CC&A, the process waste that mainly contains plastics should be disposed for co-processing in cement industry. As per record, the unit has disposed 172 MT during January 2019 to October 2019. The unit is having agreement with M/s Ultratech Cement Ltd. for the waste co-processing. Present stock of plastic waste is about 55 to 60MT stored in premises.

Here it is worth to mention that GPCB has given trial permission to another unit of M/s Shah Paper Mills Ltd. Unit -1, Phase – III GIDC Vapi for a period of one year on 06.11.2019 for utilization of non-recyclable process waste i.e. mainly plastic waste and Deinking sludge to use as a fuel in 12 TPH boiler (**Annexure- 4**). It is informed that plastic waste from Unit-3 will be disposed in the boiler of Unit-1.

Conclusion:

It is concluded from the above observations that the unit is generating substantial quantity of Deinking sludge from the process. This sludge is disposed to card board manufacturers. Another unit of M/s Shah Paper Mills Ltd. Unit -1, Phase – III GIDC Vapi has obtained permission from GPCB to use deinking sludge as fuel in waste to energy boiler. The unit sent ETP waste to CHWTSDF for final disposal.

2.4 M/s Maheshwari Logistics Limited, Ambethi, Valsad

The unit was operational during the visit with CC&A valid till 31.03.2021. Mr. Narendra Shukla, General Manager of the unit was present during the visit and provided necessary information.

The unit is engaged in manufacturing of Recycle Paper, Recycled Roofing / Plain Sheet by using waste paper as raw material. The consented production capacity of the industry is 9000 MT/Month for Recycled Paper and 640 MT/Month for Recycled Roofing / Plain Sheet and as per the record provided, average production is 6843 MT/Month during April 2019 to October 2019.

The manufacturing process comprises following major steps:

Pulping → Pulper Pit → H.D. Cleaner → TurboScreen → Refining (homogenization of mass) → Thickener → Centri Cleaner → Pressing → Drying → Sheeting

The entire wastewater generated from the process is collected in a tank and treated in ETP. The treated water from different stages of ETP is re-used in the process as per the requirement. Reportedly, the sludge recovered from various stages of treatment is sent back to the process owing to fibrous material.

The plastic waste which is separated from the process is sent to the cement units for co-processing. The industry is having agreement with M/s Ultratech Cement for co-processing of plastic waste. As per record, the unit has sent average 104 MT / Month of plastic waste for co-processing during September 2018 till November 21, 2019.

Conclusion:

It can be concluded from the above observations that the major waste generated from the unit is plastic waste which is disposed through co-processing in cement unit. The sludge generated from the different treatment stages of ETP is again used in the pulping process owing to fibrous material.

3. OBSERVATIONS WITH RESPECT TO WASTE BURINING:

The team along with the complainant visited Vapi GIDC and adjoining areas during night of 13.11.2019. Open indiscriminate burning of waste at three different locations in a big open area was observed during night time around 11 PM (**Photographs taken during the visit are given below**). The entire area was completely dark and only the high flames were visible with odorous smoke. The team again visited the same area in the next morning i.e. on 14.11.2019 and observed that different type of industrial waste such as liners, drums, plastic bags, cables etc. and also wastes from commercial areas is scattered in the area which is surrounded by population. Reportedly the area is outside the Vapi GIDC and falls in the jurisdiction of Karvad Gram Panchayat. It is understood during the survey of the area that many scrape vendors are located around this area who used to bring scrap from different

industries and commercial areas and sort them for recovery of various valuable items and throw away the rejects on this open land and burn it for volume reduction as well as material recovery. The team along with the complainant surveyed the GIDC Vapi and adjoining areas but did not observe any other incidence of open burning of waste.



Open burning of waste at night



Different type of waste spread on open land



Close view of waste / scrap at site

4. STATUS OF GROUND WATER:

The team along with the complainant collected four ground water samples around the GIDC area and one storm water drain sample in the GIDC Phase –III area (details of sampling locations is given in the table below and depicted on google map for reference).



Location of ground water and storm water drain sampling

Handwritten signature in blue ink.

Sr. No.	Name of Location	Co-ordinates
1.	Borewell of Building located at Hiranagar, Behind St. Xavier School, Chhiri, Vapi	20.376555,72.933429
2.	Borewell of Bilal Masjid, DungriFaliya, Vapi	20.3528193,72.9423892
3.	Handpump of Harifaliya, Desaiwad, Vapi	20.3693627,72.9023230
4.	Handpump near Haribhai House, Chandor, Vapi	20.345150,72.902489
5.	Storm water drain located at III rd Phase, GIDC, Vapi	20.3675862,72.9427670

The analysis results are given in the table below:

Parameters	Location-1	Location-2	Location-3	Location-4	Location-5
pH	6.98	7.34	7.16	7.11	6.89
TSS	-	-	-	-	180
TDS	2046	1332	566	820	3056
BOD	3.8	2.6	1.1	1.7	424
COD	33.5	14	5.6	9.8	1047
NH ₃ -N	0.27	0.55	0.55	0.69	42.2
NO ₃ -N	0.43	5.23	7.77	BDL	-
NO ₂ -N	0.033	0.005	0.03	0.016	-
F ⁻	0.66	0.61	0.30	0.58	-
Cl ⁻	460	411	96	178	-
SO ₄ ⁻²	603	185	78	88	-
T. Hardness	106	306	996	424	-
Ca ⁺²	23	68	167	109	-
Mg ⁺²	13	37	158	41	-
Na ⁺	381	384.5	20	78	-
K ⁺	1.9	1.2	2.2	0.3	-
T. Alkalinity	448	336	180	284	-
Phenolic Compds	BDL	BDL	BDL	BDL	7.23

The analysis results reveals that the ground water quality for the analysed parameters does not show any significant contamination except location 1 where slight organic contamination is indicated with COD value measured as 33.5 mg/l.

The analysis results of sample collected from storm water drain at night time shows significant concentrations of all analysed parameters. There was lean flow in the drain. The contamination of storm water drain is reportedly due to leakages/spillages from GIDC drainage network. This drain leads towards Bill Khadi where pumping arrangement is provided by GIDC to take the effluent and to convey to CETP Vapi for further treatment. In this connection, it is worth to mention that GPCB has issued a letter to GIDC / Notified Area Authority vide letter No. GPCB/LGT:NGT: Vapi:94(3)/2019 Dated 18.10.2019 for compliance of following points:

- I. "To provide the surface /over ground pipeline from industries to CETP for proper conveyance of effluent wherever technically feasible by removing existing underground pipeline.
- II. Restoration of any damaged storm water drains to prevent entry of wastewater into the natural drains in the industrial estate and prevention of entry of industrial wastewater in Bill Khadi and its flow downstream of GIDC estate.
- III. Proper design and construction of storm water drains within the industrial estate where it is not provided particularly in low lying areas to (i) prevent stagnation of storm water contaminated with industrial wastes (ii) to prevent indiscriminate entry of contaminated storm water into natural drains".

5. LETTERS COMMUNICATED BY THE COMPLAINANT AFTER VISIT

After completion of field inspection and monitoring in the matter, two letters from the complainant were received through Registered Post. The 1st letter dated 16.11.2019 was addressed to Hon'ble NGT with a copy to committee members Dr. N. Semwal, CPCB RD Vadodara and Shri Jaimin Rana, GPCB RO Vapi. The 2nd letter of dated 22.11.2019 was again addressed to Hon'ble NGT with a copy to Dr. N. Semwal, CPCB RD Vadodara. The 1st letter stating that the complaint was raised to the Hon'ble NGT by the complainant based on telephonic information from some known person who is not traceable at present and he personally did not noticed /observed pollution from burning of waste and black Mava. The content of 2nd letter was mostly similar to that of 1st letter with additional statement that *"Visit of the places of burning waste was carried out in night and video recorded was also carried out jointly"*.

6. CONCLUSION:

The paper mills which do not require Deinking process for products like Paper Board / Kraft Paper are generating plastic waste and small quantity of ETP sludge. It is observed that Paper Mills are having agreement with cement industries for co-processing of plastic waste. However GPCB may randomly monitor the aspect of generation and disposal of plastic waste. Reportedly the ETP sludge is mostly reused back in the process owing to fibrous material. No ETP sludge was found stored in the premises of the units during the visit.

The paper mills which require Deinking process to manufacture the product like writing / printing paper generate substantial quantity of Deinking sludge along with the plastic waste. The plastic waste is disposed through co-processing in the cement industries. The Deinking sludge is disposed to Paper Board manufacturers by one of the unit M/s Shah Paper Mill Ltd. (Unit-3) while the other unit M/s N.R. Agarwal Industries Ltd. (Unit-II) intend to use it as fuel in boiler owing to the calorific value but awaiting permission from GPCB. However, GPCB has granted trial permission for use of Deinking sludge and non-recyclable process waste i.e. plastic waste as fuel in boiler to one of the unit of M/s Shah Paper Mill Ltd. and also issued Consent to Establish to M/s Agarwal Industries Ltd. (Unit-I) for use of Non-recyclable Plastic

waste as fuel in boiler. In this regard, Paper Mills should maintain the record of generation and final disposal of Deinking sludge and the same should be verified by GPCB. Further, compliance of emissions from Waste to Energy boilers is to be ascertained through regular monitoring from time to time.

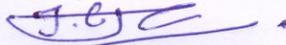
GIDC needs to implement the directions issued by GPCB vide letter No. GPCB/LGT:NGT: Vapi:94(3)/2019 Dated 18.10.2019 (**Annexure-5**) in a time bound action plan to ensure proper collection and conveyance of industrial effluent to CETP.

The team during inspection, along with complainer did not observe specific incidence of alleged burning of Paper Mill waste, however indiscriminate burning of huge quantity of waste / scrap in open land of Karvad Gram Panchayat in the night emanating fumes in the surrounding area was observed. GPCB, Valsad District Administration, and Karvad Gram Panchayat need to take note of the above reported incidence and take serious action against the persons responsible for illegal dumping and burning of waste. In this regard the Hon'ble NGT order dated 26.03.2019, O.A. No. 606/2018 (point no. 20 – Proceedings in Almitra Patel) may also be referred. The point of order reads as *"We specifically direct there shall be complete prohibition on open burning of waste on lands, including at landfill sites. For each such incident or default, violators including the project proponent, concessionaire, ULB, any person or body responsible for such burning, shall be liable to pay environmental compensation of Rs. 5,000/- (Rs. Five Thousands only) in case of simple burning, while Rs. 25000/- (Rs. Twenty Five thousand only) in case of bulk waste burning. Environmental compensation shall be recovered as arrears of land revenue by the competent authority in accordance with law."*

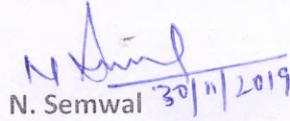
7. RECOMMENDATION:

1. Since the open burning is taking place in the land of Karvad Gram Panchayat, hence primary responsibility to stop accumulation of waste / scrap lies with the Gram Panchayat. In this regard, GPCB may issue letter to the Karvad Gram Panchayat asking them to take necessary action to stop dumping and accumulation of unauthorized waste / scrap in their land.
2. GPCB, District Administration and Urban Local Body shall carry out joint survey of the scrap traders cluster in the said area within 3 months and outcome of this survey may be taken up in the District Environment Committee (Which was constituted vide Hon'ble NGT order dated 15.07.2019 in the matter of O.A. 710/2017) for Valsad District, to monitor and stop such illegal open burning.
3. Although, GIDC has made arrangement for diverting the leakages / spillages from storm water drain to CETP Vapi, however, GIDC needs to comply with the directions of GPCB issued vide letter No. GPCB/LGT:NGT: Vapi:94(3)/2019 Dated 18.10.2019 regarding proper upgradation / maintenance of drainage network. GPCB needs to follow-up with GIDC and to obtain the latest status of compliance of above letter.

4. The paper industries which are generating Deinking sludge (which has been removed from the category of hazardous waste) shall submit quarterly report of generation and disposal of Deinking sludge to GPCB. Moreover, the units which have obtained one year trial permission from GPCB for using Deinking sludge for Waste to Energy should submit compliance report to GPCB for the trial period, and in turn GPCB may carry out random emission monitoring to verify it.



Jaimin Rana
AEE, GPCB RO Vapi



N. Semwal
Sc.B, CPCB RD Vadodara



GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN

Sector-10-A, Gandhinagar 382 010

Phone : (079) 23222425

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Website : www.gpcb.gov.in

R.P.A.D

"Consent to Establish" (NOC)

CTE-102505

NO: GPCB/CCA-VSD-115(5)/ID: 23017/

TO,
M/s. N R AGARWAL INDUSTRIES LTD (UNIT-I),
PLOT NO: 167, 169, PHASE-II,
GIDC ESTATE, VAPI - 396195,
TAL: PARDI, DIST: VALSAD.

Sub: Consent to Establish (**Amendment**) under Section 25 of the Water (Prevention and Control of Pollution) Act 1974 and Section 21 of Air (Prevention and Control of Pollution) Act 1981.

Ref: Your application inward no: 157023 dated 07/05/2019 and subsequent correspondences,

Sir,

Without prejudice to the powers of this Board under the Water (Prevention and Control of Pollution) Act-1974, the Air (Prevention and Control of Pollution) Act-1981 and the Environment (Protection) Act-1986 and without reducing your responsibilities under the said Acts in any way, this is to inform you that this Board grants **Consent to Establish** for installation of non recyclable plastic waste fired 8 TPH Boiler at an industrial plant/activities located at PLOT NO: 167, 169, PHASE-II, GIDC ESTATE, VAPI - 396195, TAL: PARDI, DIST: VALSAD.

The Validity period of the order shall be up to 24/06/2024.

CONDITIONS UNDER THE AIR (PREVENTION AND CONTROL OF POLLUTION) ACT 1981:

1. The following shall be used as fuel in the Boiler.

Sr. No.	Fuel	Quantity
1.	Non recyclable plastic waste & LDO for Boiler (8 TPH)	38 MT/Day & 1.44 KL/Day

2. The flue gas emission through existing stack shall confirm to the following standards:

Stack No.	Stack attached to	Stack height in Meter	Air Pollution Control System	Parameter	Permissible Limit
1.	Boiler (8 TPH)	45	ESP, Cyclone, Wet Scrubber	PM SO ₂ NO _x	150 mg/NM ³ 100 ppm 50 pm

3. Coal + Lignite consumption in existing boiler (30 TPH) reduced from 154 MT/day to 116 MT/Day. But in case of non-availability of non-recyclable plastic waste unit shall consume 154 MT/Day Coal + Lignite in existing boiler (30 TPH).

M/s. N R Agarwal Industries Ltd (Unit-I) (PCB ID: 23017)

4. The concentration of the following substances in the ambient air within the premises of the industry and at a distance of 10 meters from the source (other than the stack / vent with height of more than 9 meters from the ground level) shall not exceed the following levels:

Sr. No.	Pollutant	Time Weighted Average	Concentration in Ambient air in $\mu\text{g}/\text{M}^3$
1.	Sulphur Dioxide (SO_2)	Annual	50
		24 Hours	80
2.	Nitrogen Dioxide (NO_2)	Annual	40
		24 Hours	80
3.	Particulate Matter (Size less than $10\ \mu\text{m}$) OR PM_{10}	Annual	60
		24 Hours	100
4.	Particulate Matter (Size less than $2.5\ \mu\text{m}$) OR $\text{PM}_{2.5}$	Annual	40
		24 Hours	60
5.	Carbon Monoxide (CO) mg/m^3	8 Hours	02
		1 Hour	04

5. All measures for the control of environmental pollutant shall be provided before commencing production.

CONDITIONS UNDER HAZARDOUS AND OTHER WASTES (MANAGEMENT AND TRANSBOUNDARY MOVEMENT) RULES, 2016

6. Applicant shall have to comply with provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016,
- Industry shall provide adequate collection, storage, treatment & transportation system in accordance with the nature, quantity & compatibility of hazardous waste and shall offer their hazardous waste only to authorized operator of the ultimate disposal facility.
 - Applicant shall comply all the directives issued by Honorable Courts, notifications issued by Ministry of Environment & Forest, Department of Environment & Forest, Central Pollution Control Board and other competent authorities time to time.
 - Applicant shall comply all the guidelines published by Ministry of Environment & Forest, Department of Environment & Forest, Central Pollution Control Board and other competent authorities time to time.
 - Industry shall have to display on-line data outside the main factory gate with regard to quantity and nature of hazardous chemicals being handled in the plant, including wastewater and air emissions and solid hazardous wastes generated within the factory premises.

GENERAL CONDITION:

7. Adequate plantation shall be carried out all along the periphery of the industrial premises in such a way that the density of plantation is at least 1000 trees per acre of land and a green belt of 05 meters' width is developed.
8. In case of change of ownership/management the name and address of the new owners/partners/directors/proprietor should immediately be intimated to the Board.



GPCB

GUJARAT POLLUTION CONTROL BOARD

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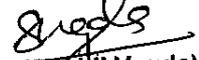
(079) 23232152

Fax : (079) 23232156

Website : www.gpcb.gov.in

9. The applicant shall however, not without the prior consent of the Board bring into use any new or altered outlet for the discharge of effluent or gaseous emission or sewage waste from the proposed industrial plant. The applicant is required to make applications to this Board for this purpose in the prescribed forms under the provisions of the Water (Prevention and Control of Pollution) Act-1974, the Air (Prevention and Control of Pollution) Act-1981 and the Environment (Protection) Act-1986.
10. The concentration of Noise in ambient air within the premises of industrial unit shall not exceed following levels:
Between 6 A.M. and 10 P.M.: 75 dB (A)
Between 10 P.M. and 6 A.M.: 70 dB (A)
11. Applicant is required to comply with the Manufacturing, Storage and Import of Hazardous Chemicals Rules-1989 framed under the Environment (Protection) Act-1986.
12. Management of Solid Waste generated from industrial activities shall be as per Solid Waste Management Rules-2016 (solid waste as defined in Rule-3(46)).

For and on behalf of
Gujarat Pollution Control Board


(Sushil Vegda)
Senior Environmental Engineer

M/s. N R Agarwal Industries Ltd (Unit-I) (PCB ID: 23017)

Page 3 of 3

Clean Gujarat Green Gujarat

ISO 9001:2008 & ISO-14001 - 2004 Certified Organisation

Outward No:514416,22/07/2019

ANNEXURE - 2

F. No.23/38/2017-HSM
Government of India
Ministry of Environment, Forest & Climate Change
HSM Division



2nd Floor, Jal Block
Indira Paryavaran Bhawan
Jor Bagh Road, Aliganj
New Delhi - 110 003
Date: 8th August 2017

Subject: Removal of De-inking Sludge from Hazardous Waste Category -reg.

This refers to your communication dated 28th July 2016 requesting the Ministry for "Removal of De-inking Sludge from Hazardous Waste Category".

2. The Technical Review Committee had a detailed deliberation on the matter during its 62nd Meeting held on 25th May 2017. The Committee was informed that the process of de-inking involves mechanical action and mild chemicals involving soap, aluminium chloride etc. but no chlorine or hypochlorite. The Committee noted that the sludge has been analysed by an accredited laboratory and various constituents analysed are reported to be below the concentration limits in Schedule II. However, the sludge contains AOX in the concentration of 263 mg/kg for which no limit has been prescribed in Schedule II of the HW Rules, 2016.
3. The Committee noted that for paper mills the limit of AOX has been provided in respect of effluent discharge (1 kg/ton of paper). On that basis the effluent for discharge may contain upto 100 mg/l of AOX whereas the leachate from the sludge will contain only 13.15 mg/l. The AOX in the sludge meets the limit for discharge from paper mills and sludge can therefore be considered as non-hazardous.
4. The matter has been reviewed in this Ministry and subsequently the recommendations of the Committee are agreed to.
5. This issues with the approval of the Competent Authority.

(Dr Sonu Singh)
Scientist D/ Joint Director

To:

M/s Gujarat Paper mills association, 198, Varun complex, Phase-II G.I.D.C, Vapi-396195



GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN

Sector-10-A, Gandhinagar 382 010

Phone : (079) 23222425

(079) 23232152

Fax : (079) 23232156

Website : www.gpcb.gov.in

R.P.A.D.

NO: GPCB/CCA-VSD-121(3)/ID: 23954/

To,
 ✓ **Ms. N.R. AGRAWAL INDUSTRIES LTD (UNIT-II),**
PLOT NO. 1, PHASE-I,
G.I.D.C. ESTATE, VAPI- 396195,
TAL: PARDI, DIST: VALSAD.

SUB Removal of De-inking sludge from Hazardous Waste category- reg....

REF: (1) Your letter inward no. 2436 dated: 15/01/2018.
 (2) Letter No. F. No. 23/38/2017-HSM dated 08.08.2017 of
 MoEF&CC, Gol, New Delhi.

Sir,

This has reference to your letter regarding removal of De-Inking Sludge form the Hazardous Waste Category given in the authorization part of the consolidated consents & authorization granted by the Gujarat Pollution Control Board vide CCA order AWH-82665 dated 17/11/2016 issued vide No. GPCB/CCA-VSD-121(3)/ID-23954/377854 dated: 14/12/2016.

In this regards, referring letter dated 08.08.2017 issued by the Ministry of Environment, Forest and Climate Change, Government of India, for removal of De-Inking Sludge form categories of Hazardous Waste. The following correction in the quantity of ETP waste given after removal of 2380MT/Month de-inking sludge quantity.

Sr. No.	Category of Hazardous Waste as per the Schedules I, II and III of these rules	Authorized mode of disposal or recycling or utilization or co-processing, etc.	Quantity granted in CCA with De-inking Sludge	Quantity after removal of De-inking Sludge
1	ETP waste 35.3	Collection, Storage, Transportation, Disposal at TSDF-VGEL, Vapi.	2510 MT/Month	125 MT/Month

- The Unit shall not dispose the De-inking sludge at any place on land and records for generation and its management shall be maintained accordingly.

For and on behalf of
 Gujarat Pollution Control Board

Sushil Vegda

(Sushil Vegda)

Senior Environmental Engineer

Clean Gujarat Green Gujarat

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Outward No: 467606, 01/09/2018



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R.P.A.D.

NO: GPCB/CCA-VSD-170(4)ID: 24365/

TO,
M/S. SHAH PAPER MILLS LTD (UNIT-1),
PLOT NO: 5202, PHASE-III,
GIDC ESTATE, VAPI- 396195,
TAL: PARDI, DIST: VALSAD.

SUB: Amendment (AWH- 104337) to Consolidated Consent & Authorization (CC & A) under various Environmental Acts/ Rules.

REF: 1) Your Application inward No.157801 dated: 04/06/2019.
2) CTE issued vide this office letter dated: 01/11/2018.

Sir,

The Gujarat Pollution Control Board had granted Consolidated Consents & Authorization Order No. AWH- 93094 dated 17/05/2018, Which is valid up to 31/12/2022. This order was served vide letter No. GPCB/CCA-VSD-170(4)ID: 24365/455438 dated: 17/05/2018 is further amended with respect of following conditions.

SPECIFIC CONDITION:

- You shall comply guideline to be issued by Ministry of Environment, Forest and Climate Change, New Delhi in the matter in O.A.No.1038/2018 and Hon'ble NGT order dated 10/07/2019 and 23/08/2019.
- You shall comply specific conditions mentioned in annexure-I.
- This is only trial permission for utilization of De-Inking Sludge & non recyclable process waste, in case of not meeting norms you shall remove related plant & machinery of boiler using waste as fuel.
- You shall take necessary measures for control of Dioxin & Furan.
- You shall inform the Board before starting of the plant.
- This permission is only trial run for one year and after verifying the performance and air emission norms Board shall take further decision in this regard.
- In case failure to use non recyclable process waste, you shall operate boiler only on LDO and coal as a fuel.
- You shall install scrubber as APCM with 12 TPH boiler within 3 months.
- You shall comply with guidelines/directions published from time to time by GPCB and/or CPCB for coal handling, fly ash handling activity, handling of hazardous waste for storage, transportation and co-process.
- You shall submit quarterly report regarding the generation, handling and disposal of fly-ash to GPCB.
- You shall comply with various provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 regarding storage, transportation and disposal.
- You shall be carried out transportation of Hazardous waste through only GPCB Registered Trucks/ Tankers and other transport vehicles and shall be equipped by GPS system.
- You shall increase the green belt by 40% of the total area beyond the permissible requirement of 33%, whenever feasible with the help of social forestry.
- You shall install and operate STP within 3 months and treated sewage shall be utilized as scrubbing media and other utility uses.

M/s, Shah Paper Mills Ltd (Unit-1) (PCB ID: 24365)

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1. **CONDITIONS UNDER WATER (PREVENTION AND CONTROL OF POLLUTION) ACT 1974:**

1.1 The quantity of total fresh water consumption shall not exceed 12322 KLD as per break up mentioned in form D submitted for consent application under Water (Prevention and Control of Pollution) Act-1974. Source of fresh water shall be only from GIDC supply.

- a) Industrial: 12298 KLD
- b) Domestic: 24 KLD

1.2 The quantity of generated industrial effluent from the manufacturing process and other ancillary industrial operations shall not exceed than 10656 KLD.

1.3 10576 KLD waste water recycled after required treatment.

1.4 80 industrial effluent shall be sent to CETP for further treatment & disposal.

1.5 The quantity of sewage effluent from the industry shall not exceed 18 KLD.

2. **TRADE EFFLUENT**

2.1 The treated effluent from the industrial unit shall conform to the CETP inlet norms mentioned in below table:

Table:
Norms/Standards for CETP of M/s. Vapi Green Enviro Limited (Vapi-CETP) and their member industry

Sr. No.	Parameter	Industry Outlet Norms (Max. Permissible values)	CETP-Vapi Outlet Norms (Max. Permissible values)
(1)	(2)	(3)	(4)
1	pH	6 - 9	6 - 9
2	Biological Oxygen Demand BOD ₃ , 27 °C	400 mg/l	30 mg/l
3	Chemical Oxygen Demand (COD)	1000 mg/l	250 mg/l
4	Total Suspended Solids (TSS)	300 mg/l	100 mg/l
5	Fixed Dissolved Solids (FDS)	2100 mg/l	2100 mg/l
6	Temperature, °C	shall not exceed more than 5 °c above ambient temperature	
7	Oil and Grease	10 mg/l	10 mg/l
8	Ammonical Nitrogen	50 mg/l	50 mg/l
9	Chlorides	600 mg/l	600 mg/l
10	Sulphates, as SO ₄	1000 mg/l	1000 mg/l
11	Fluorides	2 mg/l	2 mg/l
12	Sulphides, as S	2 mg/l	2 mg/l
13	Phenolic Compounds	1 mg/l	1 mg/l
14	Zinc	5 mg/l	5 mg/l
15	Iron	3 mg/l	3 mg/l
16	Copper	3 mg/l	3 mg/l
17	Nickel	3 mg/l	3 mg/l
18	Arsenic	0.2 mg/l	0.2 mg/l



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19	Cyanides, as CN	0.2 mg/l	0.2 mg/l
20	Vanadium	0.2 mg/l	0.2 mg/l
21	Lead	0.1 mg/l	0.1 mg/l
22	Hexavalent Chromium	0.1 mg/l	0.1 mg/l
23	Total Chromium	2 mg/l	2 mg/l
24	Trivalent Chromium	2 mg/l	2 mg/l
25	Selenium	0.05 mg/l	0.05 mg/l
26	Cadmium	0.05 mg/l	0.05 mg/l
27	Mercury	0.01 mg/l	0.01 mg/l
28	Bio-assay Test	-	90 % survival of Fish after 96 hour in 100 % effluent
29	Insecticides/ Pesticides	Absent	Absent
30	Colour (pt.co scale) in units	*	*

Note: *All efforts shall be made to remove colour & unpleasant odour as far as practicable

2.2 The final treated effluent conforming to the above standards mentioned in Column No. 3 shall be discharged through GIDC underground drainage system into CETP, Vapi for further treatment and disposal.

2.3 The applicant shall either stop or curtail their production activities if the effluent is not adequately treated by CETP or CETP is not in functional.

2.4 Domestic effluent shall be disposed off through septic tank/soak pit system.

3. CONDITIONS UNDER THE AIR (PREVENTION AND CONTROL OF POLLUTION) ACT 1981:

3.1 The following shall be used as fuel into the existing Steam Boiler.

Sr. No.	Fuel	Total Quantity
1.	Non-Recyclable Process Waste and De-Inking Sludge, LDO & Coal	1825 Kg/Hr 30 Lit/Hr 1080 Kg/Hr

3.2 The flue gas emission through existing stack shall conform to the following standards:

Stack No.	Stack attached to	Stack height in Meter	Air Pollution Control System	Parameter	Permissible Limit
1.	Steam Boiler- II (12 TPH)	50	ESP + Scrubber	PM SO ₂ NO _x	150 mg/NM ³ 100 ppm 50 ppm

3.3 There shall be no process gas emission from the manufacturing process and other ancillary industrial operations.

M/s. Shah Paper Mills Ltd (Unit-1) (PCB ID: 24365)

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- 3.4 The concentration of the following substances in the ambient air within the premises of the industry and at a distance of 10 meters from the source (other than the stack / vent with height of more than 9 meters from the ground level) shall not exceed the following levels:

Sr. No.	Pollutant	Time Weighted Average	Concentration in Ambient air in $\mu\text{g}/\text{M}^3$
1.	Sulphur Dioxide (SO_2)	Annual 24 Hours	50 80
2.	Nitrogen Dioxide (NO_2)	Annual 24 Hours	40 80
3.	Particulate Matter (Size less than $10 \mu\text{m}$) OR PM_{10}	Annual 24 Hours	60 100
4.	Particulate Matter (Size less than $2.5 \mu\text{m}$) OR $\text{PM}_{2.5}$	Annual 24 Hours	40 60
5.	Carbon Monoxide (CO) mg/m^3	8 Hours 1 Hour	02 04

- 3.5 **M/S. SHAH PAPER MILLS LTD (UNIT-1)**, is hereby granted an authorization based on the enclosed signed inspection report for generation, collection, reception, storage, transport, reuse, recycling, recovery, pre-processing, co-processing, utilization, treatment, disposal or any other use of hazardous or other wastes or both on the premises situated **PLOT NO: 5202, PHASE-III, GIDC ESTATE, VAPI- 396195, TAL: PARDI, DIST: VALSAD.**

Sr. No.	Category of Hazardous Waste as per the Schedules I, II and III of these rules	Quantity	Authorized mode of disposal or recycling or utilization or co-processing, etc.
1.	Process Waste (Non-Recyclable)	21.1	Collection, Storage, Transportation and Use as a fuel in waste to energy plant OR Collection, Storage, Transportation and Disposal by sale to Cement Industry for Co-processing.

- Waste other than above Hazardous Waste shall be disposed after prior permission of Gujarat Pollution Control board.
- All measures for the control of environmental pollution shall be provided before commencing production.
- All other conditions of CCA order **AWH- 93094** dated **17/05/2018** issued vide No. **GPCB/CCA-VSD-170(4)ID: 24365/455438** dated: **17/05/2018** shall remain unchanged.

For and on behalf of
Gujarat Pollution Control Board

(Sushil Vagda)
Senior Environmental Engineer

**Terms and Conditions of Hazardous & Other Wastes
(M, H & TM) Rules, 2016**

Specific Conditions:-

1. It shall be the responsibility/duty of the occupier or operator of a facility to take adequate steps while handling hazardous waste to contain contaminants and prevent accidents and their consequences on human and environment, and prevent person working on the site with information, training and equipment necessary to ensure their safety.
2. The occupier/importer/transporter and operator of the facility shall be liable for all damage caused to the environment or third party due to improper handling of the hazardous wastes or disposal of the hazardous wastes.
3. The occupier and the operator of the facility shall be liable to pay financial penalties as levied for any violation of the provisions under Hazardous & Other Wastes (Management, Handling and Transboundary Movement) Rules, 2016 by the State Pollution Control Board with the prior approval of the Central Pollution Control Board.
4. In case of transportation of hazardous wastes through a State other than the State of origin or destination the occupier shall intimate the concerned State Pollution Control Board before, he hands over the hazardous wastes to the transporter (If Applicable).
5. In case of transport of hazardous wastes for final disposal to a facility for treatment, storage and disposal existing in a State other than the state where the Hazardous waste is generated, the occupier shall obtain "No Objection Certificate" from the State Pollution Control Board of both states. (If Applicable)
6. The occupier or operator of the Treatment, Storage and Disposal Facility or Recycler shall ensure that the Hazardous wastes are packaged and labeled, based on the composition in a manner suitable for safe handling, storage and transport. The labeling and packing shall be easily visible and be able to with stand physical conditions and climatic factors as per the guidelines issued by The Central Pollution Control Board from time to time. The transport of hazardous wastes shall be in accordance with the provisions of the rules made by the Central Government under the Motor Vehicles Act, 1988 and other guidelines issued from time to time and the transporter shall comply with the provisions of Hazardous & Other Wastes (Management, Handling and Trans boundary Movement) Rules, 2016. (If Applicable)
7. The utilization of hazardous wastes as a supplementary resource or for energy recovery of after processing shall be carried out by the units only after obtaining approval from the Central Pollution Control Board.
8. In any case, import of hazardous wastes from any country to India for the disposal shall not be permitted.
9. The occupier/facility operator shall use hazardous waste tracking system of Xtended Green Node (XGN) for online real time data for preparing online manifest system for regular up-dation retrieval & maintain record thereof by generator as well as receptor. The compile data shall be submitted at the end of the year after due verification by facility operator to the concern GPCB, Regional office & Head Office Gandhinagar.



ANNEXURE - 5

GUJARAT POLLUTION CONTROL BOARD

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Website : www.gpcb.gov.in

RPAD

No. GPCB/LGT:NGT:Vapi:94(3)/2019/524759

Date
18 OCT 2019

To,
GIDC/ Notified area Authority
Plot No. C/5, 101,
Nr. Telephone exchange,
New Office Building, Cross Road,
GIDC Industrial estate,
Vapi- 396195

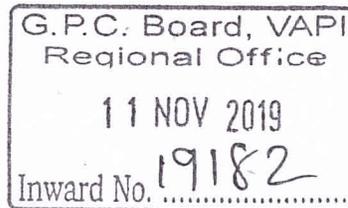
Sub. Regarding compliance of directions passed in Hon'ble NGT Order
dated 28/08/2019

Ref. Hon'ble NGT Order dated 28/08/2019 (Attached herewith Annexure- A)

Sir,

Hon'ble National Green Tribunal has passed various orders in the matter of
O.A. No. 95/2018, Principal Bench New Delhi (Arayavart Foundation Vs. M/s.
Vapi Green Enviro Limited & Ors.).

WHEREAS, Committee framed under Hon'ble NGT Order dated 11/01/2019
has submitted revised committee report dated 05/08/2019 and mentioned
actions to be undertaken by various authorities i.e. GIDC, Notified area
Authority, local body as mentioned below for the restoration of River Daman
Ganga:



21/11/19 2418

2

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WHEREAS, Hon'ble National Green Tribunal has passed an order dated 28/08/2019 and in Para 11 mentioned various points related to restoration of River Daman Ganga.

WHEREAS attention has been drawn for the following points and you are hereby directed to comply with following points mentioned in the Hon'ble NGT Order dated 28/08/2019:

- (i) "To provide the surface/over ground pipeline from industries to CETP for proper conveyance of effluent wherever technically feasible by removing existing underground pipeline.
- (ii) Restoration of any damaged storm water drains to prevent entry of wastewater into the natural drains in the industrial estate and prevention of entry of industrial wastewater in Bill khadi and its flow downstream to GIDC estate.
- (iii) Proper design and construction of storm water drains within the industrial estate where it is not provided particularly in low lying areas to (i) prevent stagnation of storm water contaminated with industrial wastes (ii) to prevent indiscriminate entry of contaminated storm water into natural drains."

Further for more details, copy of the referred order is enclosed herewith for ready reference and for compliances at your end within stipulated time limit.

This letter is issued after approval of competent authority.


(N.M. Tabhani)

Member Secretary



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ENCL:

1. Annexure-1- Copy of Hon'ble NGT Order dated 28/08/2019

Copy To;

1. GIDC, Head Office, Block No. 3,4,5, Udhyog Bhavan, Sector-11,
Gandhinagar-382011- For necessary actions please.
- ✓ 2. Regional Office- Vapi, Gujarat Pollution Control Board - For necessary
actions please.