

Marvada Amrutlal Becharlal  
Village-Ler, Taluka Bhuj,  
District Kutch, Gujarat  
Date : 27.01.2020

O.A. No. 669/18

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To,  
Shri Adarsh Kumar Goelji,  
Chair Person  
National Green Tribunal, Faridkot House,  
Copernicus Marg, New Delhi - 110 001

Subject: Violation of pollution laws by Ashapura Group of Companies, Village-Ler, Taluka Bhuj, District Kutch, Gujarat, NGT order of hearing date 20.11.2019, Item Nos. 02, Original Application No. 669/2018

Hon'ble Adarsh Kumar Goelji,  
In matter of violation of pollution laws by Ashapura Group of Companies, Village-Ler, Taluka Bhuj, District Kutch, Gujarat, you have ordered to immediately remove gypsum dumped by unit at various sites outside the premises & clear all the sites. In this regard, Gujarat Pollution Control Board (GPCB) take decision to ban on import of Gypsum, for that GPCB issue cancellation of approval of handling of Gypsum through Jetty. People used imported Gypsum instead of available better quality Gypsum. It is our bad luck that we run blindly behind the imported things which are harmful hazardous waste to foreign countries. After banning of import of Gypsum, some big Jetty holder make representation in Government to allow again import of Gypsum. As a result, GPCB make technical discussion again and allow Gypsum import in some extent. So, please sir, issue immediate order to stop import of Gypsum by Jetty.

Thanks,

(Marvada Amrutlal Becharlal)

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Item No. 02

Court No. 1

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

Original Application No. 669/2018

(With Report dated 18.11.2019)

Marvada Amrutlal Becharlal

Applicant(s)

Versus

State of Gujarat

Respondent(s)

Date of hearing: 20.11.2019

**CORAM:** HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON  
HON'BLE MR. JUSTICE S.P WANGDI, JUDICIAL MEMBER  
HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER  
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER  
HON'BLE MR. SAIBAL DASGUPTA, EXPERT MEMBER

For Applicant(s): Ms. Shilpa Chohan, Advocae

For Respondent(s): Mr. Maninder Singh, Senior Advocate with Ms.  
Ruchi Kohli, Ms. Nidhi Jaswal, Ms. Manyaa  
Chandok, Advocates

**ORDER**

1. The matter has been taken up in continuation of order dated 03.09.2019 on the subject of violation of environmental norms by M/s Ashapura Group of Companies, Village Ler, Taluka Bhuj, District Kutch, Gujarat.
2. The matter has been dealt with by this Tribunal on several dates in the light of the factual and action taken reports filed by the Gujarat Pollution Control Board (GPCB) as well as submissions made on behalf of the applicant.

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3. On 27.05.2019, the matter was reviewed as follows:-

4. Accordingly, a joint report was furnished on 23.03.2019 by the CPCB and the GPCB which was considered on 06.05.2019. The joint Committee found that the unit had not compliant with the environmental norms. It had stored gypsum which was required to be scientifically disposed. There was damage to the ground water quality which was required to be restored. Plantation had not been done as per the CCA Condition No. 3.9. Sprinklers were required for control of dust emissions. Line No. 1 & 2 could not be allowed to operate till proper fugitive emission control system is set up. Dust control system is required at raw material crushers and acid activation reactors are required to be covered. The stand of the GPCB was that bank guarantee furnished by the unit for Rs. 15 lakhs was forfeited on account of non-compliance and an additional bank guarantee of Rs. 30 Lakhs had been taken to secure compliance. Notice was issued for prosecution. Compensation assessment was left to the District level Committee. Revocation of the closure has been extended for three months subject to certain conditions.

10. The applicant has placed on record written submissions in response to the action taken report by the GPCB stating that bleaching clay plant in question is causing severe air pollution as shown by the photographs taken on 21.05.2019 and is also dumping effluents in the nearby drains as shown by photographs taken on 22.05.2019. Gypsum is dumped in villages upto a distance of 5 Kms of the government land in Village Kukma and is being covered with China Clay/sand as shown by the photographs. Gypsum is being dumped along the highways, in agricultural fields and government lands causing land pollution. Effluent water from the evaporation pond is being dumped in government land in Village Ler as shown by the photographs. Evaporation pond has been constructed on the government land adjoining the plant in question by encroachment. The Revenue Department of the Government has issued show cause notice dated 16.11.2018, a copy of which has been filed. We have asked the GPCB to look into these submissions and photographs and documents and take further appropriate action in accordance with law.

11. In continuation of order dated 06.05.2019, we direct the GPCB to take further appropriate action in accordance with law in respect of the violation of the environment in the past as well as which are still continuing by way of closure of polluting activities,

prosecution of the polluter and recovering compensation for the loss and furnish a further report within one month by email at judicial-ngt@gov.in.”

4. On 03.09.2019, the matter was further reviewed as follows:

- “4. In pursuance to above, the GPCB has filed further action taken report dated 28.06.2019 to the effect that compensation of Rs. 97,50,000/- has been recovered. Prosecution was being pursued and the Committee has been constituted to study the disposal of gypsum in back filling of the mines.
5. On behalf of the applicant, written submission dated 09.07.2019 has been filed relying upon the observations in the inspection reports of the GPCB and also submitting that gypsum was being stored on the Government land. Further written submissions have been filed during the course of hearing inter-alia stating that pet coke was still being stored and that the stand that the same was returned to Kotak Petro Chem P. Limited, Jamnagar, was not correct in view of response to a RTI query by GPCB itself. Further, photographs have been filed showing storage of gypsum.
6. Learned counsel for the GPCB seeks time to verify the facts and file a further report. Such report may be filed on or before 15.10.2019.
7. Needless to say that GPCB must ensure remedial action against the storage of gypsum in accordance with law.”

5. Accordingly, report has been filed on 18.11.2019 by the State PCB as follows:

**“REGARDING GROUNDWATER CONTAMINATION & RESTORATION:**

- As per the earlier analysis report of GPCB dated 17/09/2019, which has also been confirmed by the final report of M/s Kadam Environmental Consultants, Ammonia contamination is observed in different bore-wells in the vicinity of industrial unit. The source of ammonia contamination in ground water may be due to use of lime from “Gujarat Narmada Valley Fertilizers & Chemicals Ltd (hereinafter “GNFC”) and improper (Kachha pond) storage of wastewater. The said analysis reports under which a total of 10 bore-wells samples were collected in the vicinity of unit, the contamination of ground water is present.

### < Results of Ground water Analysis

> Ground water samples are collected from the surrounding bore wells from various locations including reference samples & unit's bore-wells total 31 Nos. and total 7 Nos. of Gypsum samples are collected from the surrounding area of the unit and various locations where gypsum was dumped.

> M/s. Pollucon Laboratories Pvt. Ltd. Surat carried out the sampling during 21/10/2019 to 23/10/2019 and analysed gypsum, ground water as well as soil samples to see the impact of the contamination on ground water and soil with respect to specific parameters.

> "M/s. GPCB assigned work for detailed study with remedial action/complete solution for contamination of Groundwater as well as Soil by M/s. Ashapura Perfolay Ltd, Survey No. 167, Village: Ler, Ta: Bhuj-Kutch to M/s. Pollucon Laboratories Pvt. Ltd.-Surat

- The Report of Pollucon on "Study on groundwater as well as soil from peripheral of M/s Ashapura Perfolay Ltd." was received by GPCB with the following observations:
  - Promptly, on 18/10/2019, GPCB engaged the services of 'Pollucon Laboratories Pvt. Ltd.' to carry out soil and ground water sampling and ascertain the level of contamination thereof.
  - The Report of Pollucon on "Study on groundwater as well as soil from peripheral of M/s Ashapura Perfolay Ltd." was received by GPCB with the following observations:

### b) Restoration of contaminated of groundwater:

- The unit is now using fresh lime and has stopped using lime from GNFC.
- Unit has provided RCC pond for storage of wastewater and converted the kaccha pond into a pucca pond.

### a) Elimination of Source of Contamination:

### Remedial Measures:

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Sr. No.	Parameters	Location 1 to 10 (approximate Within 1.5 km at distance from M/s. Ashapura Perfoclay Ltd.)	Location 11 to 30 - except 20, 21, 27 & 31 (approximate 2 to 8 km at distance From M/s. Ashapura Perfoclay Ltd.)	Location 20, 21, 27 & 31 approximate 8 to 10 km at distance from M/s. Ashapura Perfoclay Ltd.)
		Results		
1.	Ammonical Nitrogen	Ranging from 0.34 to 16.10 mg/l	Ranging from 0.38 to 6.20 mg/l	Ranging from 0.42 to 1.20 mg/l
2.	Total Dissolved Solids	Ranging from 1620 to 5285 mg/l	Ranging from 509 to 4211 mg/l	Ranging from 618 to 1415 mg/l

- > While comparing above results with IS 10500:2012 Drinking Water, some of the bore well water is not suitable for drinking purpose."

The Report of Pollucon Laboratories on "Study on groundwater as well as soil from peripheral of M/s Ashapura Perfoclay Ltd." is annexed herewith as ANNEXURE A.

- As per the Interim Action Taken Report, the unit had appointed M/s. Kadam Environmental Consultants for conducting the ground water quality restoration and geo-hydrological study as per the Revocation conditions vide Notice dated 27/09/2019 and an interim report was submitted. M/s Kadam Environmental Consultants have now submitted the final report titled "Groundwater Remediation Action Plan at Ashapura Perfoclay Limited, Bhujodi, Bhuj, Kutch District" with the following observations:
  - > Presence of Ammonical nitrogen and nitrate in groundwater may be due to use of impure lime in neutralization process in the past and use of fertilizer (Urea) in agricultural lands.
  - > Elevated levels of total dissolved solids, chloride, Sulphate, Nitrate etc. may be due to local geology.

In light of the high levels of Ammonical nitrogen found in the ground water, the Report provides for a time bound action plan for remediation thereof which is annexed as Annexure 9 in the said Report.

The Report of M/s Kadam Environmental Consultants titled "Groundwater Remediation Action Plan at Ashapura

- > Gypsum analyzed for its chemical and other parameters. Most probable pollutant ammonia is within the norms of Waste
- > To identify the pollutants, manufacturing details is referred as per the mail of GPCB dated 18<sup>th</sup> Oct, 2019. Looking to such details of manufacturing process, the probable inorganic pollutants studied.
- > Soil samples testing results of parameters such as pH, Heavy metals, Na and K are found to be more or less in the range of the samples collected from distance between 8 to 10 kms from M/s. Ashapura PerfoclayLtd.
- > Following observation given by Department of Agriculture Chemistry & Soil Science Junagadh Agriculture University for gypsum: "Different methods and levels of gypsum application to cotton crop improves the seed cotton, stalk yield and seed yield but unable to reach the level of significance, but the S status of soil after harvest of the crop increased significantly."
- > As per the MoEF vide letter no. F no. 23-161/2014-HSMD, dated 17/10/2014.
- > "Gypsum from this source can be categorized as non-hazardous."
- > Total 6 Nos. of gypsum sample were collected at different dumping site and 1 sample collected from gypsum storage area within factory premises. Gypsum is analyzed and analyzed parameters are with the norms. (Test Report No.- PLPL/130703009 and dated 03.07.2013)
- > For more clarity and evaluation reference sample may be useful at some extent. Preliminary reference samples collected for 4 nos. of water samples and 3 nos. of soil from distance of approximate more than 8 kms from M/s. Ashapura Perfoclay Ltd, Survey No. 167, Village - Ler, Tal - Bhuj, Kutch.
- > To study the impact around approximate 10 km of area is considered. Gypsum dumping is done by M/s. Ashapura perfoclay Ltd, Bhuj-kutch around approx. 8 km. (Ref. Annexure-3 & 4 as per documents provided by GPCB).
- > The soil samples are collected from 38 locations (total nos. of sample collected are 110 nos. and sampling done from top soil, 1 Meter, and 2 Meter depth as per the map describing the site of gypsum dumping given by GPCB. (Ref. Annexure-3 & 4).

Alongwith the ground water study, GPCB also directed Pollucon to undertake soil sampling and analysis to determine the level of contamination therein due to dumping of gypsum. As per the Final Report submitted by Pollucon, the following observations/findings are made with respect to soil contamination:

#### **REGARDING SOIL CONTAMINATION AND RESTORATION**

Perfoclay Limited, Bhujodi, Bhuj, Kutch District" is annexed herewith as ANNEXURE B.

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constituents with concentration limits as per Class A: Based on leachable concentration limits of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 as per Note I of Schedule II.

> **Results of Soil Analysis:**

Sr. No.	Parameters	Approximate 8 km distance from M/s. Ashapura Perfoclay Ltd.	Approximate 8 to 10 km distance from M/s. Ashapura Perfoclay Ltd.
		Results	
1.	pH	Ranging from 7.53 to 9.89	Ranging from 8.50 to 9.33
2.	Electrical Conductivity	Ranging from 0.02 to 3.44 ms	Ranging from 0.07 to 6.63 ms
3.	Ammonia (TCLP)	Ranging from 0.39 to 2.58 mg/l	Ranging from 0.66 to 1.13 mg/l

**REGARDING GYPSUM DISPOSAL**

- Gypsum has been dumped on a total of 35 locations by the industrial unit out of which gypsum has been lifted from 7 locations by the unit.
- As per the directions of the Order dated 03/09/2019 of the Hon'ble NGT, GPCB was directed to ascertain if the land where the gypsum has been dumped are government owned or private owned. In respect of this, the revenue records of the remaining 28 locations were inspected out of which 17 are government owned lands and the rest are private owned lands. It is however pertinent to note herein the unit has submitted affidavits of persons in possession of 27 locations out of the total 35 to GPCB, which state that these persons have no objection to the gypsum lying on the land which is in their possession and that such gypsum is useful for them due to its soil conditioning properties.
- As a result, GPCB has issued a Notice of Directions dated 18/11/2019 requiring the industry to:
  - > To execute the action plan submitted, for restoration/remediation of contaminated ground water within a period of three (3) months from the date of issuance of this notice;
  - > To immediately remove gypsum dumped at various sites outside the premises & clear all the sites as per consented conditions within a period of (3) three months from the date of issuance of this notice;

- Quarterly Monitoring of groundwater quality from on-site and off-site bore wells to know the effect prescribed norms.
- Provide ambient air quality monitoring network on the boundary of factory premises to monitor the ammonical nitrogen released as against the method for 3 Months

**6.2.2 On-site monitoring of RAP of Pump and Treat**

If possible and farmers permit, groundwater can be abstracted from GW-6 and GW-7 and provide treatment for the same. If groundwater abstraction from GW-6 and GW-7 is allowed then drilling and installation of two abstraction wells as mentioned above is not required.

- If possible and farmers permit, groundwater can be abstracted from GW-6 and GW-7 and provide treatment for the same. If groundwater abstraction from GW-6 and GW-7 is allowed then drilling and installation of two abstraction wells as mentioned above is not required.
- Pump and treat method for hydraulic containment of groundwater for removal of ammonical nitrogen from groundwater. Drilling and installation of 2 Nos. of abstraction wells (up to a depth where groundwater is tapped) are proposed in order to extract groundwater of total 70m<sup>3</sup>/day; on the North-East boundary of the site adjacent to the contaminated off-site borewells. As per treatability study carried out by KEC, pump the groundwater from these wells and collect it into a tank where aeration treatment (with diffusers) should be given for removal of ammonical nitrogen and further this water should be treated at existing RO system, permeate to be reused in process and reject water sent to existing solar evaporation pond. The schematic process flow diagram showing groundwater treatment scheme and layout showing location of abstraction wells is shown in **Figure 10** and **Figure 11** respectively.

**6.2.1 Hydraulic Containment of Groundwater**

Based on the above studies, corrective actions and interpretations we conclude and recommend following actions for Remediation;

**"6.2 Conclusion & Recommendations**

remediation as follows:

6. The report has also annexes a study report with a view to undertake

> You are hereby directed to submit progress report to above mentioned points by the 18<sup>th</sup> of December 2019, 18<sup>th</sup> January 2020 and final report by 18<sup>th</sup> February 2020 falling which direction of closure will be issued without further notice to you."

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of remediation on contamination (Ammonical Nitrogen).

- To submit quarterly monitoring reports of air quality and groundwater quality to concerned authority.

**6.2.3 On-site performance evaluation of RAP of Pump and Treat method for 3 Months**

- On basis of performance evaluation of on-site pilot trial run with pump and treat method, there will be assessment of analysis w.r.t. air and groundwater quality and efficiency of the system.

Thereafter, full-fledged installation and commissioning will be done of this RAP technique for groundwater restoration.

**6.2.4 Time bound action plan**

Proposed time bound action plan for groundwater remediation is enclosed vide **Annexure 9.**"

7. To sum up, it is clear that Gypsum dumps have caused contamination of ground water with respect to ammonia, electrical conductivity and total dissolved solids. To remedy the situation, restoration processes are placed and these need to be examined by the GPCB and the CPCB.
8. Let further steps be taken which may be overseen by the State PCB. Damage caused to the soil and ground water sources needs to be remediated by the unit. It is also necessary to issue public notice about the un-fitness of the water for drinking or other specified use in the interest of public health. Further action taken report may be furnished by the State PCB after three months by email at [judicial-ngt@gov.in](mailto:judicial-ngt@gov.in). However, in the meanwhile, periodical checks may be conducted.

A copy of this order be sent to the CPCB by email.



November 20, 2019  
 Original Application No. 669/2018  
 AK

Sabhal Dasgupta, EM

Dr. Nagin Nanda, EM

K. Ramakrishnan, JM

S.P Wangdi, JM

Adarsh Kumar Goel, CP

List for further consideration on 23.03.2020.

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