

Item No. 03

Court No. 1

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

(By Video Conferencing)

Original Application No. 669/2018

(With report dated 21.05.2020, 06.07.2020 and 28.07.2020)

Marvada Amrutlal Becharlal

Applicant(s)

Versus

State of Gujarat

Respondent(s)

Date of hearing: 01.09.2020

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

Applicant(s): Ms. Shilpa Chohan, Advocate

ORDER

1. The issue for consideration is the remedial action for contamination of ground water and soil on account of storage of Gypsum by M/s Ashapura Group of Companies, Village Ler, Taluka Bhuj, District Kutch, Gujarat, in violation of environmental norms.

2. The matter has been considered by this Tribunal in the last two years from time to time and was last considered on 20.11.2019 in light of the earlier proceedings and report of the State Pollution Control Board dated 18.11.2019. From the said report, it was found that there was contamination of ground water and soil which was needed to be

remedied. The Tribunal noted the status of contamination and directed remedial action as follows:

“6. The report has also annexes a study report with a view to undertake remediation as follows:

“6.2 Conclusion & Recommendations

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

1.2.1 Hydraulic Containment of Groundwater

- *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 70m³/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.*
- *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.*

6.2.2 On-site monitoring of RAP of Pump and Treat method for 3 Months

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

effect 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. However, in the meanwhile, periodical checks may be conducted.”

3. Accordingly the State PCB has filed action taken report dated 21.05.2020, 06.07.2020 and 28.07.2020. It will be sufficient to refer to the latest report giving the status of compliance based on inspection conducted on 21.07.2020. The status was found to be as follows:

“Status regarding Gypsum Disposal:

- *Out of 39 locations, waste gypsum has been lifted from 26 locations and rest 13 locations are still occupied with waste gypsum.*

- *Out of 13 locations, unit has started plantation on 2 locations as per recommendation of Gujarat Industrial and Technical Consultancy Organization Ltd. (GITCO). Status Report of 13 Gypsum Locations is attached herewith as an Annexure-2.*
- *Unit has disposed 101742 MT Gypsum waste to cement industries for co-processing & 42271 MT for the back filling to abandoned mines during 1st January-2019 to 21st July 2020. Data submitted by the unit is attached herewith as an Annexure-3.*

Status regarding Groundwater Contamination& Restoration:

- *With respect to Ammonical Nitrogen:*
 - *Unit is using fresh lime for neutralization process.*
 - *The analysis results of Ammonical Nitrogen (NH₃-N) at GW-5 location, first increased slightly from 33 to 35.84 mg/l and then it is continuously decreasing from 35.84 mg/l to 6 mg/l and at GW-6 location, the Ammonical Nitrogen concentration is continuously decreasing from 55 mg/l to 8 mg/ l.*
 - *The trend of the Ammonical Nitrogen analysis result for GW-1 & GW-8 location is fluctuating, ups and down.*
 - *As per latest report, the concentration of Ammonical Nitrogen is slightly increased in bore well GW-2.*
 - *As per latest report, the concentration of Ammonical Nitrogen is not detected in bore well GW-3, GW-4, GW-7 and GW-9 & GW-10.*
- ***With respect to TDS:***
 - *Presently, the TDS concentration is higher at all the locations (1912 -7550 mg/l). The trend of TDS analysis results for all the locations are fluctuating variably and it is difficult to conclude about the impact of restoration process on the TDS.*
 - *As per third party GITCO's conclusion; The elevated level of TDS is as per the ground water quality pattern of the region*
- *Continual long term efforts will be required to restore the water quality up to satisfactory level.*
- *Unit has constructed three nos. of groundwater recharge well which may help in restoration process. Analysis report of bore-well water in and around the unit premises is attached herewith as an Annexure-4.*

Regarding Environmental Damage Compensation:

- District Level Compensation Committee (constituted as per the Order of Hon'ble High Court in Special Civil Application No. 9699/2008) has assessed compensation of Rs. 31.65 Lacs and matter is forwarded to Principal District Judge, Kachchh at Bhuj on date 15.07.2020 for further action. However, GPCB has recovered Rs. 97, 50,000/ as an environmental damage compensation on 18.06.2019 and forfeited bank guarantee of 15 lacs on 02.05.2019, this is kindly to be taken in to consideration.
Minutes of meeting of District Level Compensation Committee dated 06.07.2020 is attached herewith as an Annexure-5.”

4. Status of 13 locations where the remediation is yet to be carried out is said to be as follows:

Status of remaining 13 locations as on 21.07.2020:-

Sr. No.	Location No.	Location/Place	Current Status	As per DILR record
1.	1.	Behind Lehriya Hanuman Temple, Old stone mine, Kukma Village 23° 13'21" N 69° 46' 21" E	No progress observed. Gypsum is dumped for backfilling of old abandoned stone mine.	Survey no. 335, Village: Kukma
2.	4.	Old stone mine of Prakash Patel, Survey No. 331, Besides old Hot Mix Plant, Kukma Village 23° 13' 16" N 69° 46' 3" E	No progress observed. Gypsum is dumped for backfilling of old abandoned stone mine.	Survey no. 337, Village: Kukma
3.	5.	Behind khatri mills, Besides of above site, Traverse survey no: 331, government land, Kukma Village 23° 13' 20" N 69° 45' 58" E	No progress observed. Gypsum is dumped for backfilling of old abandoned stone mine.	Survey no. 331/3, Village: Kukma
4.	7.	Natural drain between farm of Dinesh Maharaj and Govind Vanker, survey no :218,	No progress observed.	Survey no. 218, Village: Kukma

		<i>Kukma Village</i> <i>23° 11' 56" N</i> <i>69° 46' 47" E</i>		
5.	10.	<i>Besides of Kukma-Lakhond village Road</i> <i>23° 13' 50" N</i> <i>69° 46' 48" E</i>	<i>No progress observed.</i> <i>It is observed that gypsum is dumped along the road side for leveling where underground drainage system of Kukma Grampanchay at is laid down</i>	<i>Travers Survey no. 331, Village : Kukma</i>
6.	11.	<i>Vrundavan Gir Gaudham, Shree Swaminarayan Mandir, Besides Ashapura Colony, Bhachau Road</i> <i>23° 13' 49" N</i> <i>69° 46' 48" E</i>	<i>During inspection gypsum is observed covered with silica sand</i>	<i>Travers Survey no. 331, Village : Kukma</i>
7.	14.	<i>Land of Lakhond Village</i> <i>23° 15' 12" N</i> <i>69° 46' 41" E</i>	<i>No progress observed</i>	<i>Survey no. 331, Village: Lakhond</i>
8.	15.	<i>Adjacent above site as mentioned in sr. no (14). Land of Lakhond Village</i> <i>23° 15' 11" N</i> <i>69° 46' 40" E</i>	<i>No progress observed</i>	--
9.	17.	<i>China Clay mine of Vastabhai, Village lakhond, Abandoned mine</i> <i>23° 15' 39" N</i> <i>69° 47' 17" E</i>	<i>No progress observed.</i> <i>Gypsum is dumped for backfilling of abandoned china clay mine.</i>	<i>Village: Lakhond</i>
10.	18.	<i>On Government land on Padhdhar Village</i>	<i>No progress observed.</i>	<i>Travers Survey no. 741, paiki</i>

		23° 14' 29" N 69° 48' 44" E	Gypsum is dumped for leveling of low-lying area.	Village : Padhdhar
11.	26.	Pithoradada Mandir, Ler Village. 23° 10' 23" N 69° 46' 05" E	No progress observed. Gypsum is dumped for making the side slope of land at temple.	Travers Survey no. 151, Village : Vadava
12.	38.	Maldhari Mangal Mandir Chhatralay, Bhujodi 23° 13' 45" N 69° 44' 09" E	During visit, it is observed that unit has started plantation. Silica sand is observed on the top of gypsum.	Travers Survey no. 158, Village : Bhujodi
13.	39.	Shri Vakal Mata Mandir, Village: Bhujodi 23° 13' 35" N 69° 44' 41" E	During visit, it is observed that unit has started plantation. Gypsum is dumped for leveling of low-lying area.	Travers Survey no. 158, Village : Bhujodi

5. Learned Counsel for the applicant submits that even though some restoration steps have been taken, further remediation and restoration of ground water and soil at locations of contamination needs to be carried out in a time bound manner.

6. Let the industry in question execute the remaining work expeditiously within next three months which may be overseen by a joint Committee of the Central Pollution Control Board (CPCB) and the Gujarat Pollution Control Board (GPCB). The Committee may undertake periodical checks and monitor the remedial measures.

7. Further report be filed by the joint Committee before the next date 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.

8. A copy of this order be sent to the CPCB and the GPCB by e-mail for compliance.

List again on 20.01.2021.

Adarsh Kumar Goel, CP

S. P. Wangdi, JM

Dr. Nagin Nanda, EM

September 01, 2020
Original Application No. 669/2018
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