



Central Pollution Control Board
(Ministry of Environment, Forest & Climate Change, Govt. of India)
Parivesh Bhawan, East Arjun Nagar,
Delhi – 110032

Minutes of Sixth Meeting of Monitoring Committee held on 05.12.2018 (Second Day) in Committee Room, Punjab Pollution Control Board, Focal Point, Jalandhar for Ensuring Compliance to Hon'ble NGT Order dated 04.09.2018 in the matter of O.A No 344 of 2018 and 345 of 2018 (Discharge of Molasses in River Beas)

Sixth meeting of the Monitoring Committee constituted by Hon'ble National Green Tribunal (NGT), Principal Bench, New Delhi order dated 24.07.2018 was held with the concerned departments on 05.12.2018 (Second day) in 'Committee Room, Punjab Pollution Control Board, Focal Point, Jalandhar' under the Chairmanship of Shri Balbir Singh Seechewal to discuss the issue relating to the discharge of molasses into the river Beas and subsequent measures taken by all the concerned. The list of officials who attended the meeting is annexed **(Annexure I)**.

At the Outset, Shri Pawan Garg, Chief Environmental Engineer welcomed Shri Balbir Singh Seechewal, other members of the monitoring committee and all the officials of Punjab State Government who attended the meeting. Thereafter, Shri. J.Chandra Babu, Scientist 'D', WQM-I and Nodal Officer, CPCB requested Shri. Balbir Singh Seechewal, Member of Monitoring Committee and Member, Punjab Pollution Control Board to chair the today's meeting. The Monitoring Committee has taken a serious note as the officials of Cane Commissioner and Directorate of Factories, Punjab State Government were not present before the Committee.

Shri. J.Chandra Babu, Scientist 'D' and Nodal Officer, CPCB informed that Hon'ble NGT vide order dated 04.09.2018 referred the matter of O.A No. 344 of 2018 to the monitoring committee constituted vide order dated 24.07.2018 in the matter of O.A No. 101 of 2014. He further requested that the concerned Departments to clearly indicate about the molasses discharge incidence and the subsequent action taken by the individuals so that it would be helpful for the committee for finalisation of the action plans for restoration of ecology of river Beas including rejuvenation of aquatic life in the wake of spillage of molasses in the river Beas, if required. Thereafter, formal agenda of the meeting was taken up and the respective departments as well as representatives of M/s Chadha Sugar and Industries Pvt. Ltd., Kiri Afghana, Gurdaspur as apprised to the monitoring committee are as detailed below: -

Presentation by Punjab Pollution Control Board (PPCB): -

Shri Ravinder Bhatti, Environmental Engineer, Regional Office, Batala informed that M/s Chadha Sugars and Industries Pvt. Ltd, Village-Kiri Afgana, Tehsil-Batala, District-Gurdaspur is an integrated project having Sugar Mill unit as well as Molasses Based Distillery and Grain Based Distillery in one complex at Village-Kiri Afgana, Tehsil-Batala, District-Gurdaspur. The officials of Punjab Pollution Control Board (PPCB) also informed that the Environmental Clearance No. F.No. J-11011/8/2010-1AII (1) dated 25/04/2011 was granted by the Ministry of Environment and Forest, Government of India for establishment of the integrated project a) M/s Chadha Sugars and Industries Pvt. Ltd,

Village-Kiri afgana, Tehsil-Batala, District-Gurdaspur; b) M/s Chadha Sugars and Industries Pvt. Ltd, (Grain Based Distillery), Village-Kiri Afgana, Tehsil-Batala, Distt-Gurdaspur; and c) M/s Chadha Sugars and Industries Pvt. Ltd, (Molasses Based Distillery), Village-Kiri Afgana, Tehsil-Batala, Distt-Gurdaspur. As per records of PPCB, the Unit has obtained Consent from PPCB for manufacture of refined sugar at 400 MTD, sugar mill capacity of 4500 Tonnes Crushing Per Day (TCD) which is having validity up to 31.03.2022. On 19.04.2018, the Cane Commissioner, Punjab State has ordered M/s Chadha Sugars and Industries Pvt. Ltd, for additional crushing of sugar cane than the cane crushing capacity permitted by the PPCB.

A telephonic message from the industry at around 8:00 AM on 16/05/2018 in the office of the RO, PPCB, Batala, that an accident has occurred from the molasses storage tanks (open) of the sugar mill and due to which the molasses (about 100 tonnes) had overflowed from the open storage tanks due to high temperature in the open storage tanks and the spillage of the molasses had entered into the Kahnuwan Swamp Drain which ultimately lead to River Beas. Soon after the information, the Officers of the PPCB, Batala immediately rushed to the site and it was observed that large amount of molasses stored in 2 no. of open storage tanks got self-ignited due to exothermic reaction, which results in unstoppable flow of molasses foam from both the tanks onto the premises of the industry and some part of it flowed into Kahnuwan swamp drain. As informed by the PPCB officials, the temperature of the molasses foam/molasses was high and it was not possible to stop the flow at that stage manually or mechanically. Over a period of few hours the molasses cooled down and on the morning of 17/05/2018, machinery was deployed on war footing to stop the flow of molasses foam into the Kahnuwan swamp drain. The flow/spillage of molasses into the Kahnuwan swamp drain was controlled around 2.00 PM on 17/05/2018. Due to spillage of molasses foam into Kahnuwan swamp drain and further into river Beas, the fishes in the river Beas had died and it is expected that it has also damaged other flora and fauna in the River Beas. When the incident of molasses spillage occurred the surface water samples were collected on 17/05/2018 from River Beas downstream of Bridge at River Beas, at confluence of Kahnuwan Swamp Drain and River Beas of Village Bhait Pattan near temporary Bridge & from Kahnuwan Swamp Drain downstream from industry located at about 55 m distance. As per the analysis report of sample collected from Kahnuwan Swamp Drain downstream shows the BOD level was observed to be 88 mg/l, which caused depletion of dissolved oxygen leading to fish kill in Beas River. PPCB officials also informed that they have also informed to the District Magistrate /Dy. Commissioner, SDM, Bhatala about the incident.

Further, on 17.05.2018, Er. Rantej Sharma AEE and Er. Harbir Singh, SEE who visited the site on 17.05.2018 apprised the committee members about the initiatives taken by PPCB to control the damage from the spillage of molasses and subsequent actions taken against M/s Chadha Sugar and Industries Pvt. Ltd., Kiri Afghana, Gurdaspur.

Considering the emergency situation, Directions under section 33-A of Water (Prevention & Control of Pollution) Act 1974 were issued to M/s Chadha Sugars and Industries Pvt. Ltd for sealing of plant and machinery of Sugar Mill and a Bank Guarantee of Rs. 25 lacs was ordered to be encashed and the consent to operate issued to M/s Chadha Sugars and Industries Pvt. Ltd was revoked with immediate effect, vide PPCB ZO letter No.1436 dated 17.05.2018. Later, Principal Secretary, Department of Science & Technology, Govt of Punjab vide order dated 18.05.2018 directed PPCB officials for making enquiry regarding accidental spillage of molasses from the open storage tanks of M/s Chadha Sugars and Industries Pvt. Ltd., Village Kiri Afghana, Tehsil

Batala, District Gurdaspur and for submission of the report within 3 days. Subsequently, a team comprising officers of the Punjab Pollution Control Board headed by Shri GS Majithia, Chief Environmental Engineer, PPCB, Jalandhar, Shri Harbir Singh, Senior Environmental Engineer of Zonal Office, Amritsar and Shri Kuldeep Singh, Environmental Engineer, Regional Office, Batala visited the site on 21/05/2018 and based on the report of the visiting team, the industry M/s Chadha Sugars and Industries Pvt. Ltd. was given hearing on 24.05.2018 by the Chairman, PPCB. Main decisions were taken during the hearing which include (i) The Mill shall undertake an endowment programme of Rs. 5.00 crore (five crore) to be deposited with Punjab Pollution Control Board as environmental compensation for causing degradation of ecology of Beas river due to spillage of its molasses in the river Beas, on the basis of polluter pays principal, so as to utilize deposited amount for restoration of ecology of river Beas including rejuvenation of aquatic life. (ii) An Action Plan in this regard shall be prepared by Department of Forest, Department of Wild Life Department of Water Resources, PPCB, Punjab Agricultural University (PAU) Ludhiana and GADVASU, Ludhiana, so that sustainable results of ecological rejuvenation could be achieved over a period of five years; iii) As the management of the mill had remained negligent in its approach to safeguard its installation which lead to pollution in River Beas, leading to large scale mortality of aquatic life therefore prosecution against the Mill and the responsible persons shall be filed in the Competent Court of Law under the provisions of the Water (Prevention & Control of Pollution) Act 1974 and a Criminal Complaint under section 44 read with 47 of the Water (Prevention & Control of Pollution) Act, 1974 has been filed against the industrial unit and persons responsible in the Court of Chief Judicial Magistrate, Gurdaspur and iv) A committee consisting of representative of Director of Factories, State Excise & Taxation Commissioner and Chairman, PPCB shall be constituted to suggest further safeguards required in the sugar mill with a view to ensure that such incidents do not re-occur in future.

PPCB officials also apprised the monitoring committee that the departments formed for submission of Action Plans for conservation and restoration of ecology of river 'Beas' including rejuvenation of aquatic life in river Beas, have met twice on 18.06.2018 and 26.06.2018 and prepared Action Plans and the same have been examined by Expert Committee in a meetings held on 24.08.2018, 12.10.2018 and same was finalized on 22.11.2018 at PPCB Head Office, Patiala. It has been decided by PPCB Expert Committee that Department of Fisheries, Govt. of Punjab shall be the supervising agency for the Rejuvenation Plan.

PPCB officials also apprised the monitoring committee that in compliance of the endowment programme, afore-said sugar mill has already deposited a sum of Rs. 2 Crore out of 5 Crores with the office of the PPCB. The Punjab Pollution Control Board has already released Rs. 25.0 lakhs to Department of Forest & Wildlife Preservation, Punjab for the rejuvenation and restoration of ecology of River Beas.

Also, PPCB officials informed that the criminal complaint has been filed in the Hon'ble Court of Chief Judicial Magistrate, Gurdaspur against M/s. Chadha Sugar and Industries Pvt Limited and against the persons who at the time of the offence was committed and was responsible to the company for the conduct and business of the company as mentioned in section 47 of the Water (Prevention & Control of Pollution) Act, 1974. The next date of hearing is fixed for 14/12/2018. Also it was informed that PPCB under NWMP is carrying out sampling of River Beas at 12 locations. The results were also furnished to the Monitoring Committee during meeting.

Presentation by M/s Chadha Sugar and Industries Pvt. Ltd., Kiri Afghana, Gurdaspur

The company representatives informed that their unit obtained Consents from PPCB, Sugar cane crushing license, Sugar cane purchasing license and also informed that sugar production during crushing season 2017-2018 was 50% higher than the same in the year before i.e., 2016-2017 on all India level. In compliance to the cane commissioner dated 19.04.2018, the company crushed 111 lac Tonnes of sugar cane during 2017-2018 as compared to 85 lac Tonnes during the year 2016-2017. The company could able to crush at higher capacity since there was inbuilt additional capacity in the plant and machinery and since the company reduced the steam consumption by improving the process of manufacturing.

It was mentioned by the company representatives that the molasses is generated at about 4.5 % of sugar cane crushed i.e., 202 TPD. There are two tanks for storage of molasses one is of SS Tank of capacity 7500 Tonnes and another is of MS Tank as a part of Distillery of capacity of 7500 Tonnes. In the year 2017-2018, there were no purchasers of molasses in the Punjab State since the molasses from UP was available at a basic price of Rs.1/- per quantal, which also lead to storage of molasses for extended period. The company also conveyed that they were under pressure from the grower's associations as well as from the Cane Commissioner, Punjab to keep the mill running till 30th April, 2018. Under the such circumstances, there was excess milling and excess molasses production. During the meeting, the company representatives also conveyed that they had steel tanks for molasses storage and when the available steel storage capacity was full they stored accumulated molasses in underground open lined lagoons (2 Nos of size about 40 m X 20 m X 6 m) in view of the additional cane crushing. To the query of informing about additional cane crushing and the order imposed by cane commissioner, PPCB officials have informed that neither M/s. Chadha Sugars and Industries Limited nor cane commissioner have informed about additional cane crushing by the afore-said unit.

The reason for the unintentional accident as per the company was the higher ambient temperature during the month of May, 2018. In the 2nd week, the ambient temperature was very high (around 40-42°C) which caused auto ignition in the molasses stored in the open brick lined storage tanks leading to very high temperature of 90-95 °C. The high temperature led to expansion of molasses by 3-4 times causing over-flow of molasses foam within the complex till evening of 16th May, 2018 and after evening, a part of it entered in nearby Kahnuwan Swamp Drain leading to Beas River. On 17.05.2018, machinery such as JCB and Excavator was deployed on war footing to control/avoid the spillage. Thereafter on 17th May, 2018 as per directions of PPCB the mills were sealed by the PPCB and directions were issued for revoking the Water Consent of sugar mill. The representatives of M/s Chadha Sugar and Industries Pvt. Ltd., Kiri Afghana, Gurdaspur conveyed that the following actions: -

- 6500 Tonnes capacity of molasses storage tank already constructed and the Steel Storage Tank of 8000 MT is being constructed so as to be ready before end of season 2018-19.
- The company is operating the molasses-based distillery to its full capacity since 25th September, 2018 so as to consume molasses and as per the directions of the safeguard committee.

- The retaining wall is constructed around ETP of Brewery and Sugar Mill to avoid any spillage outside.
- The molasses tanks were got approved from excise department as well as from directorate of factories.
- The site plan of sugar mill with all ETP's was got approved from Directorate of Factories.
- Submitted a proposal for expansion of sugar mill to 10,000 TCD and Distilleries from 30 KLD to 60 KLD, for which the Unit got TOR.
- The company has already deposited an amount of Rs.2.00 Crores out of 5 Crores towards endowment fund to PPCB.
- The company also informed that charred molasses left over after the accident is non-hazardous in nature as analysed by an approved lab.
- The company also indicated that as per the affidavit submitted jointly by CPCB & PPCB to Hon'ble NGT in the month of June 2018, the water quality of swamp drain as well as nearby Beas river was complying with the water quality criteria.

The company prayed to the committee that the accident was happened after 16 days of closure of the sugar mill, neither it was intentional nor related at all with the sugar mill. The company conveyed to Hon'ble NGT that multiple legal cases are going on against the company and its employees by various agencies and any new case will add to the multiplicity of case.

Presentation by Department of Excise and Taxation, Punjab

Sh. Rajindar Tanwar, ETO informed that their department is not concerned with the Sugar Unit however they are concerned with the Distillery units. He informed that regular permission is being granted by their department to the Distillery units to purchase Molasses from Sugar Division. He also informed that there is no time limit for storage of Molasses. He also stated that by M/s Chadha Sugar and Industries Pvt. Ltd., Kiri Afghana, Gurdaspur has obtained permission from their department under East Punjab Molasses Control Act, 1948.

Presentation by Department of Forest

Shri Satnam Singh, Conservator of Forest, Bist Jalandhar representative of Department of Forest informed the committee that their department has already filed FIR and also prosecuted M/s Chadha Sugar and Industries Pvt. Ltd., Kiri Afghana, Gurdaspur.

Presentation by Department of GADVASU: -

Dr. Meera D. Ansal explained that GADVASU in her presentation informed that a dedicated river health monitoring cell will be established for conducting Bio-diversity survey so as to arrive at pathogenicity index, plankton profile, Fish diversity as a part of the ecological health survey of the river Beas. She has given the modified budgetary requirement and 3 years study action plan for assessment of the ecology of River Beas

Presentation by Department of PAU, Ludhiana: -

Dr. Tejdeep K.Kler from Punjab Agriculture University, Ludhiana informed that water, soil and plants sample will be collected from three sampling stations along the river Beas quarterly and will be analysed for physico-chemical and heavy metal parameters. She also give modified budgetary requirement and 3 years study action plan for assessment of ecology of River Beas.

Presentation by Department of Fisheries, Punjab: -

Dr. Madan Mohan, Director from Department of Fisheries, Punjab informed that the incident happened on 16.05.2018 and on 17.05.2018 which caused heavy habitat destruction. Due to high level of BOD, large scale fish mortality observed. From River Beas and Harike wildlife Sanctuary together support about 90 species of fishes, which belong to cyprinidae and bagridae family. WWF India has recorded only 18 fish species in Dec 2017 during their survey.

Lot of fishes died and were washed away to river shore, about 62Tonnes of fish loss has been estimated and fishing ban was enforced immediately. Huge quantity of water was released to minimise the molasses impact which washed away small fishes and their food items. He is also of the view that study relating Fish Germ Plasm Assessment should be carried out through National Bureau of Fish Genetic Resources (NBFGR), Lucknow.

Presentation by Department of Wildlife: -

Ms. Gitanjali Kanwar from WWF informed that it is the priority of Department of Forests and Wildlife Preservation to restock as many as possible native and indigenous fish species in the river Beas. Restocking cannot be undertaken on basis of threatened, vulnerable species as it is not easy to get wild populations of threatened, vulnerable fish species and most of the fish farms in Punjab and other neighbouring States are only rearing Indian Major Carp and Exotic Major Carp. She also informed that there is no standardized technique to rear cat fishes and Cat fishes are not reared anywhere in Punjab. The Fisheries Department should help in this regard and she suggested to focus on creating viable habitat for native and indigenous aquatic species. The Forest department will focus on rejuvenating ecology of Beas Conservation Reserve on a holistic basis focusing on mammals, birds, reptiles, amphibians, fishes, invertebrates, zooplanktons and phytoplankton's. She also informed that so far 3000 plants have been planted along the bank of river Beas. She informed that the Department has identified Critical areas in River Beas where the trees / shrub species will be planted mostly in the island areas and about 3000 plants have been planted along the bank of river Beas. The Department of Forests and Wildlife Preservation Punjab will explore more about fish availability, ranching in consultation with State Fisheries Department, Central Inland Fisheries Research Institute and National Bureau of Fish Genetic Resources, Lucknow. She further informed that Department of Forest and Wildlife Preservation, Punjab presently undertaken studies with regard to aquatic river species survey and the study is expected to complete by December 25, 2018 and can share the findings to the Committee by 03 January 2019.

Upon deliberations on the issues, following decisions were taken by the monitoring committee for further necessary action by all the concerned Departments: -

1. The committee directed M/s Chadha Sugar and Industries Pvt. Ltd., Kiri Afghana, Gurdaspur to submit various documents which include the following:- (i) A copy of the Consent and authorisation obtained from PPCB, Cane Crushing License, Sugar Cane Purchasing licence and a copy of the permission obtained from Excise Department for sale /purchase of molasses (ii) letters issued by Cane Commissioner to Sugar Mill to crush additional cane (both in Punjabi and Translated in English), (iii) details such as cane crushed, molasses generation,

molasses consumed for captive distillery and sale of molasses on monthly basis with effect from November 2016 to April,2018; (iv) Photographs and videos of ETP and molasses storage tanks before and after the incident, (v) procedure/approval for the movement of molasses from sugar unit to distillery unit, (vi) Practices being followed for storage of molasses and disaster management plans being followed in developed countries by the sugar industries, (vii) various action plans submitted and remedial activities carried out by the industry on 16.05.2018 and 17.05.2018 and at present to avoid/stoppage of spillage of molasses from open storage tanks within the industry premises with proofs.

2. The Committee felt that valuable time has been already lost and PPCB is still in the process of finalising the project proposals submitted by the PCCF, PAU and GADVASU. The study should have been awarded soon after the incident and such study would have given the trend in water quality of river Beas, therefore the Committee suggested PPCB to award a "short term activity" i.e., not more than 3 weeks time period to PAU and afore-said organisations to arrive at the present status of river Beas with regard to the Bio-diversity survey so as to arrive at pathogenicity index, plankton profile, Fish diversity as a part of the ecological health survey including water quality of the river Beas for physico-chemical and biological and heavy metals and these departments shall submit the study/outcome of the 3 week project by 3rd Jan 2019 to the Monitoring Committee indicating the present status of river Beas and a comparison with the findings with the historical data. PPCB shall take immediate action on the afore-said matter to enable the concerned departments to complete the studies and for submission of the reports by 03.01.2019.
3. Action plans for restoration of river Beas finalised in consultation through its departmental committees should be submitted to the Committee by PPCB on or before December 31, 2018.
4. The Department of Fisheries shall furnish the data relating the list of species observed by their department during the period May 2017 to November 2018.
5. Cane Commissioner, Punjab State Government is required to submit a brief note to the committee within fifteen days on the situation which lead to issue an order for additional cane crushing by the industry namely M/s Chadha Sugar and Industries Pvt. Ltd and what powers such an order was issued without ascertaining the safety and cane crushing capacity of the Unit and without consulting the regulatory authorities including PPCB.
6. The Wild Life Department was requested to submit their report with regard to the historical and present status of aquatic species data in river Beas by December 31, 2018 to the Committee.
7. The Committee also suggested M/s Chadha Sugar and Industries Pvt. Ltd to get the study conducted through any reputed organisation with regard to the present status of river Beas. Also, Committee suggested M/s Chadha Sugar and Industries Pvt. Ltd to submit detailed action plans to avoid future accidents of molasses discharges from their premises into the environment including the

measures taken during the discharge of molasses into river Beas on May 16, 2018

8. As Director of Factories will be fully responsible on aspects relating to safety aspects and will ensure all safety measures are in place by the sugar industry so as to ensure that spill over and molasses or any other miss-happening does not occur in future. The measures suggested by Director of Factories to the sugar industries to be submitted to the committee within fifteen days.
9. Department of Forest and Wildlife Preservation, Punjab shall share the information and findings of the studies with regard to aquatic river Beas species survey (including comparison with the historical data of river Beas during the last year, prior to and after incidence of molasses discharge in river Beas as well as the latest findings) to the Committee on or before 03 January 2019.
10. It was decided by the Committee members to visit the site of M/s Chadha Sugar and Industries Pvt. Ltd., Kiri Afghana, Gurdaspur, after the meeting to know the present conditions with regard to the provision made for storage of molasses within the industry premises.

The Meeting ended with vote of thanks to the Chair.

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Annexure-I

List of Participants

Sixth Meeting of Monitoring Committee for Ensuring Compliance to Hon'ble NGT order dated 24.07.2018 in the matter of O.A No 101 of 2014 344 of 2018 and 345 of 2018.

Date: 05/12/2018 at 9.30 AM

Venue: Committee Room, PPCB, Jalandhar.

S. No.	Name of Official	Organization/ Division
1.	Shri Balbir Singh Seechewal	Member and Chairman of the Meeting
2.	Shri A.S Dhaliwal	Member and Chief Engineer, Deptt of Local Govt, Punjab
3.	Shri J.Chandra Babu	Scientist 'D' and Nodal Officer, CPCB
4.	Shri Niraj Mathur	Member and SEE,RPCB Jaipur
5.	Dr. Tejdeep K Kler	PAU Ludhiana
6.	Dr.Meera D Ansal	GADVASU Ludhiana
7.	Dr Shammi Kapoor	Head, Deptt of Microbiology, PAU Ludhiana
8.	Dr. S.N Datta	College of Fisheries, GADVASU, Ludhiana
9.	Shri Rajinder Tanwar,	ETO, Chadha Sugar (Excise and Taxation, Gurdaspur)
10.	Shri GS Majithia	CEE, PPCB, Jalandhar
11.	Dr. Madan Mohan	Director, Fisheries Deptt, Punjab
12.	Shri Jagjivan Lal	Forest Division, Jalandhar
13.	Ms. Kalpana K, IFS	Dept of Forest, Wildlife Preservation Division, Ferozpur Wildlife
14.	Ms. Gitanjali Kanwar	WWF India
15.	Ms. G.Geethanjali, IFS	Conservator of Forest (Wildlife), Parks and Protected Area
16.	Shri Sanjiv Kumar	B.O Jalandhar
17.	Shri Wilbart Samson	DFO Gurdaspur
18.	Shri Satnam Singh	CF Bist Jalandhar
19.	Shri Sandeep Bahl	SEE,ZO Amritsar
20.	Shri Devinder Pal Singh F.R Range Kapurthala Forest Division	Punjab Forest Deptt
21.	Er. Ravinder Bhatti	EE, RO, Batala.
22.	Er. Rantej Sharma	AEE,R0, Batala.
23.	Shri R.A Singh	Chadha Sugar & Industries Pvt Ltd
24.	Mrs. Jasdeep Kaur Chadha	Chadha Sugar & Industries Pvt Ltd
25.	Shri Pradeep Ahuja	Chadha Sugar & Industries Pvt Ltd