# Action Plan for Control of Pollution in River Ghaggar



# Chandigarh Pollution Control Committee

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#### 1. Back Ground.

Hon'ble National Green Tribunal, New Delhi in the matter original application No. 138 of 2016 and 139 of 2016 has passed an order dated 7<sup>th</sup> August, 2018 vide which it is informed that proceedings in the matter O.A. No. 138 of 2016 and O.A. No. 139 of 2016 titled Stench Grips Mansa's Sacred Ghaggar River (Suo-Motu case) were initiated before the Tribunal on a reference received from the National Human Right Commission (NHRC). The NHRC took Suo-Motu action on the basis of a news item appearing in The Tribune, dated 12.05.2014 under the caption "Stench Grips Mansa's Sacred Ghaggar River" to the effect that the river Ghaggar had turned into a polluted water body on account of discharge of effluents – industrial as well as municipal.

In pursuant to the order of Tribunal dated 09.12.2016, a joint inspection has been carried out by the representatives of the Central Pollution Control Board, Punjab State Pollution Control Board, Haryana State Pollution Control Board, Himachal Pradesh State Pollution Control Board. Officials of Union Territory, Chandigarh also joined the said inspection team. Further, as per report, submitted by the concerned Pollution Control Boards to the NHRC as well as Minutes of the meetings on various dates in which the respective States participated. The joint analysis report of the joint monitoring of river Ghaggar samples has also been filed. The findings of the joint inspection report are that values of various parameters such as BOD, TSS, Faecal Coliform, Lead and Iron were beyond permissible limits at most of the locations in Himachal Pradesh, Haryana, Punjab and Chandigarh.

In view of above disappointing scenario, the Chief Secretaries of the States of Himachal Pradesh, Haryana, Punjab and also the Administrator of U.T., Chandigarh have been directed to constitute Special Task Force (STFs) comprising of District Magistrate, Superintendent of Police, Regional Officer of the State Pollution Control Board in concerned District and one person to be nominated by the District Judge in every District in his capacity of Head of the District Legal Services Authority. Such STF may identify persons responsible for violation of law so that action can be taken. At the State Level, the STF will comprise of the Chief Secretary, Secretary Environment, Secretary of Urban Development and Secretary of Local Body. The District Level Special Task Force will submit a monthly action taken report to the State Level Task

Force and State Level Special Task Force will furnish 3 monthly report or the action taken to the Central Pollution Control Board.

The mandate of the above task force has also been given in the order of Hon'ble NGT. The STF at the district level has the mandate of indentifying the persons responsible for the violations of the law so that the action can be taken. The State level STF has to furnish three monthly report to the CPCB which will be based on the monthly report submitted by District Level STF.

An Executing Committee was also constituted by Hon'ble NGT (as per para 8 of the order) under the Chairmanship of Justice Pritam Pal, Former Judge, Punjab and Haryana High Court.

# 2. About River Ghaggar and Its Tributaries, activity in the catchment area of river Ghaggar and its tributaries.

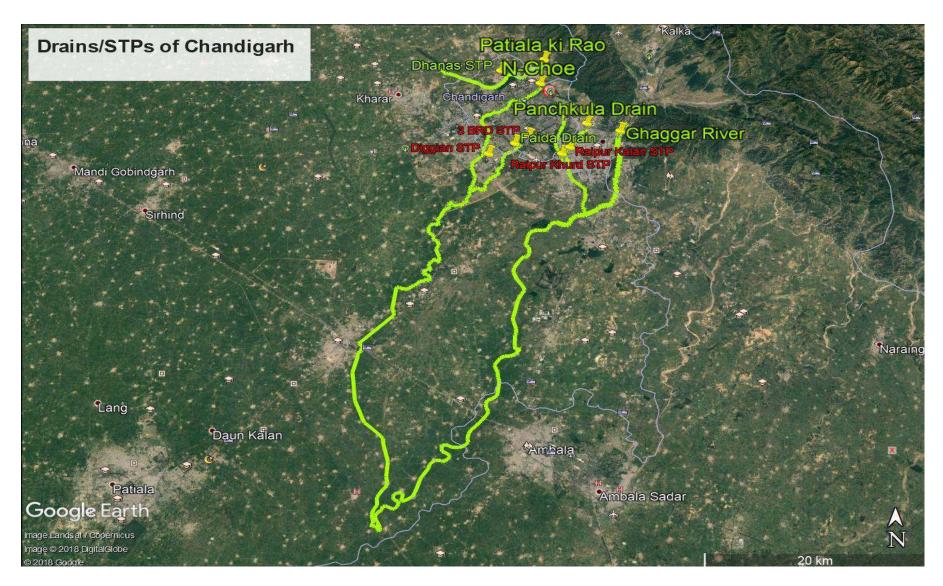
Ghaggar River, Ghaggar also spelled Ghagghar, river, northern India. The Ghaggar rises in the Siwalik (Shiwalik) Range, in northwestern Himachal Pradesh state and flows about 200 miles (320 km) southwest through Haryana state, where it receives the Saraswati River. It eventually dries up in the Great Indian (Thar) Desert. Just southwest of Sirsa it feeds two irrigation canals that extend into Rajasthan state. Its seasonal flow is dependent on monsoonal (seasonal) rainfall. The main tributaries of the Ghaggar are the Kaushalya river, Markanda, Sarsuti, Tangri and Chautang. The river flows at a distance of 7.0 K.M. from the nearest point in the U.T. of Chandigarh

Ghaggar River and Other drains is given in Figure 1 & Figure 2.

Figure 1



Figure 2



## 3. Water quality goals as per the existing provisions or guidelines/specifications of CPCB.

As per provisions water quality should meet with the standards prescribed in scheduled VI of Environment (Protection) Act, 1986 for discharge of effluents in inland surface water. As Sukhna Choe and N-Choe are joining River Ghaggar hence, before meeting with river Ghaggar both of the choes should meet with the prescribed standards as mentioned in Schedule VI of Environment (Protection) Act, 1986.

# 4. Sources of Pollution of River Ghaggar and Its tributaries within the jurisdiction of the respective State/UT.

In the catchment area of river Ghaggar, the waste water is generated mainly by the two sources:

#### 1. Domestic

#### 2. Industrial

#### 4.1 Domestic

Being a planned city Chandigarh is completely covered with sewerage network. Details w.r.t. water consumption and discharge are as given below:

| Municipal Population                                  | 10.54 Lacs (as per 2011 census)  |
|---|--|
| Volume of Domestic & Industrial Waste Water Generated | 54 MGD (Approx.)   |
| Treated waste water 48.85 MGD                         |  |
| No. of STPs   | 5  |
| Capacity of Each STP                                  | 11 MGD - 3 BRD 5 MGD - Raipur Kalan 30 MGD - Diggian 1.25 MGD - Raipur Khurd 1.6 MGD - Dhanas Total: 48.85 MGD |
| Mode of Disposal                                      | Natural Choe for all except Diggian. Diggian STP effluent goes to Irrigation Channel                           |

River Ghaggar is passing at around 7 Kms. distance from Chandigarh and there are two main sources of discharge from Chandigarh which contribute to River Ghaggar.

- 1) Sukhna Choe
- 2) N-Choe.

In these choes two types of waste water are being discharged.

- 1) Treated waste water from the STPs.
- 2) Direct discharge of untreated waste water

#### 4.2 Industrial

Ghaggar river is flowing around 7.0 K.M. far from Chandigarh and in Chandigarh no unit is allowed to run without consent and without ETP (if unit is generating waste water). After treatment in their captive ETP, treated waste water is released into sewer line which further goes to Terminal Sewage Treatment Plant and gets further treatment. Monitoring of both drains (i.e. Sukhna Choe and N-Choe) which mixes into River Ghaggar, shows that no industrial effluent is being discharged without treatment.

Being a Planned city Chandigarh has notified Industrial Area and most of the industries are either in Industrial Area Phase-I or Industrial Area Phase-II except Hotel/Restaurant/Hospitals etc which are in sectors.

Chandigarh Pollution Control Committee grants consent to operate to only those industries which are having proper effluent treatment plant or air pollution control device (whichever is applicable). Hence, all the industries operational in Chandigarh are having Effluent Treatment Plants or Air Pollution Control Devices.

Treated effluent by industries is being released into the public sewer system which further goes to Terminal Sewage Treatment Plant and gets further treatment.

Chandigarh is neither having 17 category of highly polluting industry nor there is any grossly polluting industry. There are total 3336 no. of industries operational in Chandigarh which comprise of 192 Red, 575 Orange, 577 Green and 1625 are White category industries. Red category industries includes 98 Nos. of very small scale

electroplating unit, 5 nos. of sewage treatment plants, 48 nos. of pickling plants, 1 no. Slaughter house (abattoir) run by Municipal Corporation Chandigarh, 11 nos. of microbreweries and 4 nos. of zinc processing units.

Orange category industries include majority of small scale Hotel and Restaurant which are 229 in nos. 10 nos. bottling plants, around 44 nos. of hospitals, 7 nos. of wire drawing unit without pickling, 91 nos. of service stations

Following is the table highlighting the details of industries in Chandigarh:-

| Red    |                                   | 192  |
|--------|-----------------------------------|------|
| Orange |                                   | 575  |
| Green  |                                   | 577  |
| White  |                                   | 1625 |
|        | Electroplating                    | 98   |
|        | Foundries                         | 33   |
|        | Hotel & Restaurants               | 229  |
|        | Sewage Treatment Plants           | 05   |
|        | Potable Alcohol's bottling plants | 10   |
|        | Automobile Service Stations       | 91   |
|        | Hospitals                         | 44   |
|        | Wire Drawing with Pickling        | 48   |
|        | Wire Drawing without Pickling     | 07   |
|        | Slaughter House (Abattoir)        | 01   |
|        | Zinc processing units             | 04   |
|        | Microbreweries                    | 11   |

#### **Waste Management:**

#### **Solid Waste Management:**

Municipal Corporation, Chandigarh is collecting daily around 450 Tonnes of municipal waste from all over Chandigarh and hand over the waste to the Processing Plant at Dadu majra which has RDF plant of 500 Tonnes/day, Compost Plant of 300 Tonnes/day and Bio-Methanation Plant of 5 Tonnes/day.

Municipal solid waste is being collected from house to house through cycle carts and transferred to Sahaj Safai Kendra (SSK)/Municipal Bin and it is transported to Processing Plant. Waste from mandi and hotels goes directly to Dumping Ground. In the Processing Plant (which is operated by Jai Parkash Associates Ltd.) municipal waste is processed and converted into RDF (Refused Derived Fuel) which is further

used in kilns and other furnaces as fuel additive. Old Dumping site has been capped and covered and sanitary landfill site has been developed under the CPCB project in which around 50 % funding was done by CPCB. Out of 45 Acres total area of Dumping Ground, 25 Acres has been reclaimed by capping of 16.72 Acres and 8.28 Acres sanitary land fill site has been developed in a scientific manner. Daily around 450 Tonnes municipal waste is generated in Chandigarh and transported to Processing Plant or Dumping Ground.

#### **Construction and Demolition Waste:**

The Municipal Corporation Chandigarh has awarded contact for the management of Construction and Demolition waste and the Tile manufacturing plant will be operational by March, 2019.

#### **Bio-Medical Waste Management**:

Chandigarh is having total 788 Health Care Facilities (HCFs) which are generating biomedical waste. These 788 HCFs include 49 bedded hospitals, 583 small clinics/dispensaries, 13 veterinary institutions, 3 animals houses, 4 blood banks, 118 pathological laboratories, 4 research institutes and 14 ayush hospitals/dispensaries. Total bed strength in Chandigarh is 4413. On an average 2503 kgs of biomedical waste is being generated in Chandigarh on daily basis and the same is being treated daily.

There is only one Bio-medical Waste Treatment Facility operational in Chandigarh which is collecting bio-medical waste from all Private health care facilities including Hospitals, Nursing Homes, Clinics etc. and disposing off the waste after proper treatment. Presently two incinerators are operational which are installed at PGIMER, Sector 12 and GMSH, Sector 16 with capacities of 200 kg/hr and 100 kg/hr respectively. These two Institutes treat their bio-medical waste in their own facility.

#### d) Management of Hazardous Waste

As very less amount (2847 MT in F.Y. 2016-2017) of hazardous waste is generated in Chandigarh, therefore the waste is transported and disposed off in the facilities available in the nearby states.

For disposal of landfillable waste (70 MT), Chandigarh Pollution Control Committee has made formal agreement with Punjab Pollution Control Board for utilizing their TSDF facility namely M/s Ramky Enviro Engineers Ltd. (Unit: Punjab Waste Management Project). CPCC has authorised M/s Ramky Enviro Engineer Ltd. for collection and transportation of landfillable hazardous waste from various units located in Chandigarh to their TSDF located at Village Nimbua, Derabassi, Punjab.

For disposal of incinerable waste (11.25 MT), CPCC has authorised M/s Bharat Oil and Waste Management Ltd. Sahibabad, Industrial Area, Ghaziabad, U.P. for collection and transportation of incinerable hazardous waste from various units located in Chandigarh.

For disposal of recyclable waste i.e. used oil, spent acid, acid residue (2767 MT), CPCC has authorised the following units located in Punjab, Haryana and UP for collection and transportation of recyclable waste from various units located in Chandigarh to their facilities.

| S.<br>No | Name of the Unit                        | Address   | Category                               |
|----------|---|---|--|
| 1.       | M/s Ramky Enviro<br>Engineers Limited   | Opposite Vardhman Chemtech Ltd.,<br>Village-Nimbua, PORampursainiaS,<br>Tehsil-Derabassi, District-Mohali,<br>Punjab. | ETP Sludge,<br>Chemical Sludge<br>etc. |
| 2.       | Bharat Oil Company (I) Regd.            | E-18, Sahibabad Industrial Area, Site-IV, Ghaziabad, Uttar Pradesh.   | Used Oil and Incinerable Waste         |
| 3.       | M/s B.N. Concast (P)<br>Limited         | HSIDC Complex, Plot No. 18, Industrial<br>Area, Alipur, Barwala, Panchkula,<br>Haryana                                | Used Oil                               |
| 4.       | M/s Golden Petro                        | Plot No. C-45, Industrial Focal Point,<br>Chanalon, District- SAS Nagar, Punjab.                                      | Used Oil                               |
| 5.       | M/s Mahadev<br>Petrochemicals           | Plot No. D-116(P), Industrial Focal<br>Point, Mandi Gobindgarh, Distt.<br>Fatehgarh Sahib (Punjab).                   | Used Oil                               |
| 6.       | M/s BRS Lubricants                      | D-57, Focal Point, Mandi Gobindgarh,<br>Distt Fatehgarh sahib, Punjab - 147301  | Used Oil                               |
| 7.       | M/s J.B.R<br>Technologies (P) Ltd<br>II | Opposite Nexo Industries, Kohara<br>Machhiwara Road, Kohara, Ludhiana<br>east, Punjab.                                | Acid residue                           |
| 8.       | M/s Bhagwati Agro<br>Industries         | Tosham Road, VPO. Balawas, Hisar, (Haryana).  | Acid residue                           |

#### e) Management of E-Waste:

All the big I.T. companies are disposing their E-Waste through registered Recyclers and M/s Ramky Enviro Engineers Pvt. Ltd., Opposite Vardhman, Nimbua, Derabassi is collecting e-waste from Chandigarh. As Chandigarh is very small city and cost of land is very high. Hence, there is no dismantler and recycler facility for E-waste in Chandigarh and we are totally dependent upon the facilities situated in other states. There are following three E-waste collection centres of Karo Sambhav in Chandigarh which are authorized by Central Pollution Control Board:-

- 1. Savex Technologies Pvt. Ltd., SCO No. 364, 2nd Floor, Sector 44-D, Chandigarh
- 2. Mobile Connect, SCO 2473-2474, 2nd Floor, Sector 22-C, Chandigarh.
- 3. Supertron Electronics Pvt. Ltd., Plot No. 38-D, Indl. Area, Phase II, Chandigarh.
- 5. Actions initiated for ensuring compliance to the Hon'ble National Green Tribunal (NGT), Principal Bench, Delhi Order dated 07.08.2018 in the matter of OA No. 138/2016 (T<sub>NHRC</sub>) and OA No. 139 of 2016 (T<sub>NHRC</sub>)

Initiatives taken by Chandigarh Administration in pursuance to the Hon'ble National Green Tribunal (NGT) order dated 07.08.2018 are detailed below:-

5.1 As per direction of Hon'ble National Green Tribunal District Level Special Task force and State Level Special Task Force has been constituted vide order no. ED/2018/316 dated 07.09.2018.

Constitution of Task Force is as given below. (Annexure-I)

#### **District Level Special Task Force**

| S.No. | Members                               |          |
|-------|---------------------------------------|----------|
| 1     | District Magistrate, U. T. Chandigarh | Chairman |
| 2.    | Superintendent of Police, Chd. Police | Member   |

| 3. | Sh. Amarinder Sharma, Secretary, District | Member           |
|----|---|------------------|
| S  | Legal Services Authority                  |                  |
| 4. | SE, PH Division, Engg. Deptt., Chd. Admn. | Member           |
| 5. | SE, PH Division, Municipal Corporation    | Member           |
| 6. | Scientist 'B', CPCC                       | Member Secretary |

#### **State Level Special Task Force**

| S.No. | Members  |                  |
|-------|--|------------------|
| 1     | Advisor to the Administrator, U. T. Chandigarh | Chairman         |
| 2.    | Secretary Environment, Chd. Admn.              | Member           |
| 3.    | Secretary, Urban Planning, U. T. Chd.          | Member           |
| 4.    | Secretary, Local Body, U. T. Chd.              | Member           |
| 5.    | Commissioner, Municipal Corporation            | Member           |
| 6.    | Chief Engineer, Chd. Admn.                     | Member           |
| 7.    | Member Secretary, CPCC                         | Member Secretary |

#### 5.2 Meeting with concerned officers:

In pursuance to the Hon'ble NGT order dated 07.08.2018 and orders of Executing Committee, Member Secretary, Chandigarh Pollution Control Committee convened a meeting on 12.09.2018 (Annexure-II) with the officers of Municipal Corporation, Chandigarh and Engineering Department, Chandigarh Administration in the office of CPCC to discuss the matter regarding preparation of Action Plan w.r.t. Up-gradation of existing Sewage Treatment Plants & Tapping of untreated waste water into Choes/Drainage and other follow-up actions to be taken for ensuring compliance to Hon'ble NGT Order dated 07.08.2018.

The following points were discussed.

1) Stoppage of sewer discharge point in N-Choe.

- 2) Stoppage of untreated waste water discharge near Sector 48 (3BRD).
- 3) Stoppage of waste water discharge points in Sukhna Choe specifically about colony no. 4 & Hallomajra.
- 4) Stoppage of going of industrial waste water into Sukhna Choe (pump house behind poultry farm)
- 5) Stoppage of waste water behind Gaushala, Industrial Area, Phase-I, Chandigarh.
- 6) Stoppage of waste water inside the forest area, Phase-I.
- 7) Upgradation of existing STPs
- 8) Construction of new STPs
- 9) Quantification of complete waste water discharge (Total Load).

# 5.3 Joint Inspection to check the various outlets where sewage water is charged without treatment into Sukhna choe and N-Choe as directed by Hon'ble National Green Tribunal, New Delhi

As per directions of Hon'ble National Green Tribunal, CPCC and the officers of Municipal Corporation, Chandigarh and Engineering Department, Chandigarh Administration have done the survey of entire Sukhna Choe and N-Choe on dated 18.09.2018 (**Annexure-III**) and as result of which it was found that there were many places where waste water was being discharge into drain/chow without any treatment. The points are as given below:

#### **Discharge Points in Sukhna Choe**

| Sr. No. | Point   | Status as on September 2018   |  |
|---------|---|---|--|
| 1       | Kishangarh Outlet   | There is sewage water discharge from the outlet.  |  |
| 2       | Outlet of Village Kishangarh inside Forest Nursery  | There is sewage water discharge from the outlet.  |  |
| 3       | Outlet of Shastri Nagar   | There is sewage water discharge.  |  |
| 4       | First outlet of Bapu Dham near bridge on the road connecting IT park with Sector 26, Chandigarh | There is sewage water discharge at first outlet of Bapu Dham near bridge on the road connecting IT Park |  |
| 5       | Second outlet of Bapu Dham<br>Colony (Known as Madrasi<br>Colony)                               | There is sewage water discharge at second outlet of Bapu Dham colony                                    |  |

|    | •  |  |  |
|----|--|--|--|
| 6  | Outlet from back of Gaushala, Industrial Area, Phase-I, Chd.   | There is substantial sewage discharge from back of Gaushala, Industrial Area Phase-I, Chd. |  |
| 7  | Outlet near CTU workshop<br>Industrial Area, Phase-I, Chd.<br>(Inside Forest Area)   | There is sewage discharge at the outlet near CTU workshop.                                 |  |
| 8  | Indl. Area, Phase - I, Colony No. 4.   | There is discharge from many outlets from Indl. Area, Phase - I, Colony No. 4.             |  |
| 9  | Pump House operated by Municipal Corporation behind Central Poultry Development Organization, Indl. Area, Phase - I, Chandigarh. | water directly goes to Sukhna Choe on  |  |
| 10 | Outlet of Village Hallomajra   | There is substantial sewage discharge from the outlet of Village Hallomajra.               |  |
| 11 | Village Daria  | There is discharge of sewage water from Village Daria                                      |  |

#### **Discharge Points in N-Choe**

| Sr. No. | Point                                       | Status as on September 2018            |
|---------|---|--|
| 1       | Leisure valley                              | 02 outlets are discharging waste water |
| 2       | Near red cross (Madhya Marg)                | 01 outlet discharging waste water      |
| 3       | Sec 23 near B.D Hospital (Neuro Psychiatry) | 01 outlet discharging waste water      |
| 4       | Bal Bhawan side                             | Very less discharge                    |
| 5       | 01 outlet in Beant Memorial                 | Water logging                          |
| 6       | Sector 52 (starting)                        | Two outlets discharging Sewage Water   |
| 7       | Sector 52 (End)                             | Two outlets discharging Sewage Water   |
| 8       | One outlet coming from Sec 51               | Sewage Water                           |

### 5.4 CPCC letters to Municipal Corporation, Chandigarh and Engineering Department Chandigarh Administration.

Subsequent to the meeting held with the Officials MCC and Chd., Admn. and after joint inspection, D.O. letter vide No. CPCC/2018/1490 & CPCC/2018/1491 dated 09.10.2018 issued to both the departments to submit the action taken report and action plan for compliance of order of Hon'ble NGT Delhi.

#### 5.5 <u>Meetings of District Level Special Task Force:</u>

District Level Special Task Force has conducted the meeting on 01.10.2018 in which the following decisions were taken.

- Municipal Corporation, Chandigarh and Engineering Department, Chandigarh Administration will upgrade the existing STPs/set up new STPs in their respective jurisdiction to meet with the standards directed by CPCB/CPCC and action plan in this regard alongwith timeline will be submitted within 15 days.
- 2. The officers of Chandigarh Pollution Control Committee (CPCC), Engineering Department Chd. Admn. and Municipal Corporation, Chd. have identified the 10 points where sewerage water is discharged without treatment into Sukhna Choe. Municipal Corporation, Chandigarh and Engineering Department, Chandigarh Administration will take measures to tap these points to ensure that no untreated waste water release into Sukhna Choe. Status report in this regard will be submitted by the M.C. within 15 days.
- 3. Prior intimation shall be given by the CPCC to the Police Deptt. for providing police protection to the officers for carrying out inspection and deputing the beat cops with the team.
- 4. Municipal Corporation, Chandigarh will provide the list of industrial plots who have not taken sewer connection.
- 5. Municipal Corporation, Chandigarh and Engineering Department, Chandigarh Administration will make standby arrangement of pumps alongwith the existing pumps at sewage pumping stations and Log Book shall be maintained at each pumping station.

- 6. Points where waste water is being discharged into N-Choe to be identified in the coming time.
- 7. CPCC will provide the quality of drains at entry/exit points.
- 8. MC, Chd. will provide the details of discharge points at Patiala ki rao and provide the action plan for stoppage of the same.
- 9. MC, Chd. will identify the people who have laid down illegal pipelines and discharging waste water into storm water drainage system/drains and Public Notice shall be given by the CPCC in this regard.
- 5.4 <u>2nd meeting of DLSTF</u>: After that the District Level Special Task Force conducted the 2nd meeting on 11.10.2018 vide which Scientist 'B' CPCC submitted the test report of water quality of all the drains at entry and exit point of Chandigarh and also showing the waste water discharge points at N-Choe. Accordingly the following decision were taken in the meeting.
  - The points through which the waste water is being discharged directly into the N-choe should be closed by the Municipal Corporation, Chandigarh with the support of Police.
  - 2. The format of action paln will be given by CPCC to Municipal Corporaiton, Chandigarh and Engineering Department, Chandigarh Administration and thereafter both the department will be submitted the action plan
- 5.5 <u>3rd meeting of DLSTF</u> Thereafter the third meeting of District Level Special Task Force conducted on 07.12.2018 and accordingly Municipal Corporation, Chandigarh and Engineering Department, Chandigarh Administration submitted the action taken report of the various outlets from which waste water is being discharged into Sukhna Choe and N-Choe.

#### STATUS OF UNTREATED WASTE WATER DISCHARGE IN SUKHNA CHOE

| Sr.<br>No. | Point   | Status as on<br>September<br>2018   | Status as on 07.12.2018   | Action taken  |
|------------|---|---|---|---|
| 1          | Kishangarh<br>Outlet  | There is sewage water discharge from the outlet.  | As a short<br>term measure<br>proposal has<br>been<br>submitted to<br>lift the waste<br>water and<br>connect it with<br>sewerage line | As a short term measure proposal has been submitted to lift the waste water and connect it with sewerage line. Later STP will be installed by Nov. 2022 |
| 2          | Outlet of Village<br>Kishangarh<br>inside Forest<br>Nursery                                     | There is sewage water discharge from the outlet.  | Still sewage is<br>being<br>discharged  | -   |
| 3          | Outlet of Shastri<br>Nagar  | There is sewage water discharge.  | Sump has<br>already been<br>created   | Sewage water has been tapped.   |
| 4          | First outlet of Bapu Dham near bridge on the road connecting IT park with Sector 26, Chandigarh | There is sewage water discharge at first outlet of Bapu Dham near bridge on the road connecting IT Park | -   | Leakage has<br>been plugged   |

| 5 | Second outlet of<br>Bapu Dham<br>Colony (Known<br>as Madrasi<br>Colony)                     | There is sewage water discharge at second outlet of Bapu Dham colony                        | The slum developers have constructed their toilets on the existing CBD. Matter has now been taken up with Estate Office, U.T. Chandigarh for removal of encroachment on the CBD at Bapu Dham Colony, so that flow coming into Choe may be plugged. | All such discharges points have been plugged                                 |
|---|---|---|--|--|
| 6 | Outlet from<br>back of<br>Gaushala,<br>Industrial Area,<br>Phase-I, Chd.                    | There is substantial sewage discharge from back of Gaushala, Industrial Area, Phase-I, Chd. | -  | Municipal Corporation Chandigarh has plugged the discharge point             |
| 7 | Outlet near CTU<br>workshop<br>Industrial Area,<br>Phase-I, Chd.<br>(Inside Forest<br>Area) | sewage  | -  | CTU has plugged the waste water flow. Now there is no waste water discharge. |
| 8 | Indl. Area,<br>Phase - I,<br>Colony No. 4.  | There is discharge from many outlets from Indl. Area, Phase - I, Colony No. 4.              | -  | Waste water has already been tapped and diverted to sewer line.              |

| 9  | Pump House operated by Municipal Corporation behind Central Poultry Development Organization, Indl. Area, Phase - I, Chandigarh. | In case of Non- operation of pump, waste water directly goes to Sukhna Choe on regular basis. | -   | New stand by motor has already been installed and now no waste water is being discharged into Sukhna Choe.   |
|----|--|---|---|--|
| 10 | Outlet of Village<br>Hallomajra  | There is substantial sewage discharge from the outlet of Village Hallomajra.                  | -   | Around 70 % household have already been connected to sewerline. Rest will be connected to sewer line by 31.01.19.  |
| 11 | Village Daria  | There is discharge of sewage water from Village Daria   | Excess sewage of unauthorised colony in village Daria has been tapped and put in the sump and the same is being pumped into the sewer line. | Excess sewage of unauthorised colony in village Daria has been tapped and put in the sump and the same is being pumped into the sewer line. Now there is no discharge. |

#### STATUS OF UNTREATED WASTE WATER DISCHARGE IN N- CHOE

| Sr.<br>No. | Point                  |  | Status as on 07/12/2018<br>Action taken                                   |
|------------|------------------------|--|---|
| 1          | Leisure valley         | 02 outlets are discharging waste water | One Outlet has been plugged and there is little discharge from one outlet |
| 2          | Near red cross (Madhya | 01 outlet discharging                  | Outlet has been plugged. Now there is                                     |

|   | Marg)   | waste water                                | no waste water discharge.                                       |
|---|---|--|---|
| 3 | Sec 23 near B.D<br>Hospital (Neuro<br>Psychiatry) | 01 outlet<br>discharging<br>waste water    | Outlet has been plugged. Now there is no waste water discharge. |
| 4 | Bal Bhawan side                                   | Very less<br>discharge                     | Outlet has been plugged. Now there is no waste water discharge. |
| 5 | 01 outlet in Beant<br>Memorial                    | Water logging                              | No action is taken  |
| 6 | Sector 52 (starting)                              | Two outlets discharging Sewage Water       | No action is taken  |
| 7 | Sector 52 (End)                                   | Two outlets<br>discharging<br>Sewage Water | No action is taken  |
| 8 | One outlet coming from<br>Sec 51                  | Sewage Water                               | Already tapped.   |

The Minutes of Meeting (i.e. 01.10.2018, 11.10.2018 & 07.12.2018) is enclosed at Annexure-IV, V, VI).

#### 5.6 <u>Meeting of State Level Special Task Force:</u>

After submission of the monthly reports by District Level Special Task Force has submitted their monthly reports alongwith action taken and action plan (Reports of October 2018, November 2018 & December, 2018 are enclosed at **Annexure-VII**) to State Level Special Task Force, State Level special Task Force Committee convened the I<sup>st</sup> meeting on 19.12.2018 to discuss the issues of discharge of various outlets into Sukhna Choe and N-Choe and also the monthly reports submitted by District Level Special Task Force, which was finally submitted to Central Pollution Control Board.

In the first meeting of State Level Special Task Force, Municipal Corporation, Chandigarh and Engineering Department, Chandigarh Administration submitted the action taken report.

Action taken to stop the discharge of waste water from various outlets in Sukhna Choe.

| Sr. No. | Point  | Status as on<br>September 2018  | Action Taken  |
|---------|--|---|---|
| 1       | Kishangarh Outlet  | There is sewage water discharge from the outlet.                              | As a short term measure proposal has been submitted to lift the waste water and connect it with sewerage line. Later STP will be installed by Nov. 2022 |
| 2       | Outlet of Village<br>Kishangarh inside<br>Forest Nursery   |   | -   |
| 3       | Outlet of Shastri<br>Nagar   | There is sewage water discharge.  | Sewage water has been tapped.   |
| 4       | First outlet of Bapu<br>Dham near bridge<br>on the road<br>connecting IT park<br>with Sector 26,<br>Chandigarh | water discharge at first outlet of Bapu                                       | Leakage has been plugged  |
| 5       | Second outlet of<br>Bapu Dham Colony<br>(Known as Madrasi<br>Colony)   | There is sewage<br>water discharge at<br>second outlet of Bapu<br>Dham colony | All such discharges<br>points have been<br>plugged  |

| 6  | Outlet from back of<br>Gaushala, Industrial<br>Area, Phase-I, Chd.   | There is substantial sewage discharge from back of Gaushala, Industrial Area, Phase-I, Chd.               | Municipal Corporation<br>Chandigarh has plugged<br>the discharge point   |
|----|--|---|--|
| 7  | Outlet near CTU<br>workshop Industrial<br>Area, Phase-I, Chd.<br>(Inside Forest Area)  | There is sewage discharge at the outlet near CTU workshop.  | CTU has plugged the waste water flow. Now there is no waste water discharge.   |
| 8  | Indl. Area, Phase - I, Colony No. 4.   | There is discharge from many outlets from Indl. Area, Phase - I, Colony No. 4.                            | Waste water has already been tapped and diverted to sewer line.  |
| 9  | Pump House operated by Municipal Corporation behind Central Poultry Development Organization, Indl. Area, Phase - I, Chandigarh. | In case of Non-<br>operation of pump,<br>waste water directly<br>goes to Sukhna Choe<br>on regular basis. | New stand by motor has already been installed and now no waste water is being discharged into Sukhna Choe.   |
| 10 | Outlet of Village<br>Hallomajra  | There is substantial sewage discharge from the outlet of Village Hallomajra.                              | Around 70 % household have already been connected to sewerline. Rest will be connected to sewer line by 31.01.19.  |
| 11 | Village Daria  | There is discharge of<br>sewage water from<br>Village Daria   | Excess sewage of unauthorised colony in village Daria has been tapped and put in the sump and the same is being pumped into the sewer line. Now there is no discharge. |

# Action taken to stop the discharge of waste water from various outlets in N-Choe.

| Sr.<br>No. | Point   | Status as on<br>September 2018               | Action Taken  |
|------------|---|--|---|
| 1          | Leisure valley                                    | 02 outlets are<br>discharging waste<br>water | One Outlet has been plugged and there is little discharge from one outlet |
| 2          | Near red cross<br>(Madhya Marg)                   | 01 outlet discharging waste water            | Outlet has been plugged. Now there is no waste water discharge.           |
| 3          | Sec 23 near B.D<br>Hospital (Neuro<br>Psychiatry) | 01 outlet discharging waste water            | Outlet has been plugged. Now there is no waste water discharge.           |
| 4          | Bal Bhawan side                                   | Very less discharge                          | Outlet has been plugged. Now there is no waste water discharge.           |
| 5          | 01 outlet in Beant<br>Memorial                    | Water logging                                | -   |
| 6          | Sector 52 (starting)                              | Two outlets discharging<br>Sewage Water      | -   |
| 7          | Sector 52 (End)                                   | Two outlets discharging<br>Sewage Water      | -   |
| 8          | One outlet coming from Sec 51                     | Sewage Water                                 | Already tapped. Now there is no waste water discharge.                    |

6) Existing Status in the catchment of river Ghaggar and Its Tributaries: Sewage & Industrial effluent management in rural and urban areas, ground
water quality, health status of the Public, Water quality of River Ghaggar
and Its Tributaries as well as drains contributing to the pollution load in
River Ghaggar and Its Tributaries.

There are five STPs <u>operational</u> in U.T. Chandigarh which are being operated and maintained by Municipal Corporation, Chandigarh and Engineering Department, Chandigarh Administration as per details given below.

| Sr.<br>No. | Name of STP     | Technology | Capacity  | Consent<br>Status             | Validity | Operated by                 |
|------------|-----------------|------------|-----------|-------------------------------|----------|-----------------------------|
| 1.         | Diggian         | MBBR       | 136.2 MLD | Consent<br>Granted by<br>PPCB | -        | MC, Chd.                    |
| 2.         | 3 BRD           | SBR        | 49.94 MLD | Consent<br>Granted            | 30.06.19 | MC, Chd.                    |
| 3.         | Raipur<br>Kalan | UASB       | 22.7 MLD  | Consent<br>Granted            | 31.12.21 | MC, Chd.                    |
| 4.         | Raipur<br>Khurd | ASP        | 5.675 MLD | Consent<br>Granted            | 30.06.25 | Engg. Deptt.,<br>Chd. Admn. |
| 5.         | Dhanas          | SBR        | 7.26 MLD  | Consent<br>Granted            | 31.03.22 | Engg. Deptt.,<br>Chd. Admn. |

Chandigarh Pollution Control Committee monitors the performance of STPs on monthly basis. Data of year 2018 is given in Table 1 to 5.

Table -1

<u>STP Diggian Outlet-2018</u>

| Sr.No. | Parameter s        | Unit      | Permissible<br>Limit | Jan.                     | Feb.                | March.            | April               | May                 | June            | July            | Aug.                | Sept.                 | Oct.              | Nov.                | Dec.            |
|--------|--------------------|-----------|----------------------|--------------------------|---------------------|-------------------|---------------------|---------------------|-----------------|-----------------|---------------------|-----------------------|-------------------|---------------------|-----------------|
| 1      | pН                 | -         | 5.5 to 9.0           | 6.5                      | 7.0                 | 7.2               | 7.1                 | 7.0                 | 6.9             | 6.9             | 7.1                 | 7.3                   | 7.4               | 7.2                 | 7.1             |
| 2      | DO                 | mg/l      | -                    |                          | 3.9                 | 3.5               | 3.3                 | 2.9                 | 1.9             | 3.2             | 4.9                 | 4.5                   | 4.2               | 2.6                 | 1.2             |
| 3      | COD                | mg/l      | 250                  | 198                      | 198                 | 200               | 187                 | 130                 | 128             | 95              | 71                  | 61                    | 56                | 126                 | 135             |
| 4      | BOD                | mg/l      | 30                   | 79                       | 96                  | 47                | 63                  | 58                  | 49              | 41              | 21                  | 28                    | 28                | 51                  | 58              |
| 5      | TSS                | mg/l      | 100                  | 84                       | 72                  | 73                | 85                  | 65                  | 56              | 43              | 19                  | 46                    | 30                | 45                  | 39              |
| 6      | NH <sub>3</sub> -N | mg/l      | 50                   | 20                       | 26                  | 32                | 25                  | 32                  | 23              | 30              | 21                  | 28                    | 37                | 41                  | 34              |
| 7      | PO <sub>4</sub> -P | mg/l      | 5.0                  | 3.74                     | 2.21                | 2.44              | 3.16                | 3.01                | 2.48            | 2.11            | 2.05                | 2.20                  | 3.50              | 3.10                | 4.30            |
| 8      | Total<br>Coliform  | MPN/100ml | -                    | 9.3 × 10 <sup>4</sup>    | $9.3\times10^2$     | $1.4 \times 10^4$ | $9.6 \times 10^3$   | $1.7\times10^5$     | $2.7\times10^5$ | $1.7\times10^5$ | $7.6 \times 10^4$   | 9.3 × 10 <sup>5</sup> | $8.0 \times 10^6$ | $1.8 \times 10^{6}$ | $2.7\times10^6$ |
| 9      | Faecal<br>Coliform | MPN/100ml | -                    | 6.1 ×<br>10 <sup>4</sup> | $6.1 \times 10^{2}$ | $1.1 \times 10^4$ | $5.4 \times 10^{3}$ | $6.1 \times 10^{4}$ | $6.9\times10^4$ | $1.4\times10^5$ | $5.4 \times 10^{4}$ | $6.9 \times 10^{5}$   | $4.5\times10^6$   | $1.4\times10^5$     | $1.4\times10^5$ |

<u>Table -2</u> <u>STP 3BRD FINAL OUTLET - 2018 (11 MGD)</u>

| Sr.No. | Parameters         | Unit      | Permissible<br>Limit | Jan.              | Feb.                | March.          | April             | May             | June            | July              | Aug.              | Sept.             | Oct.              | Nov.              | Dec.              |
|--------|--------------------|-----------|----------------------|-------------------|---------------------|-----------------|-------------------|-----------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 1      | рН                 | -         | 5.5 to 9.0           | 6.5               | 7.3                 | 7.3             | 7.2               | 7.2             | 7.3             | 7.5               | 7.3               | 7.7               | 7.3               | 7.3               | 7.3               |
| 2      | DO                 | mg/l      | -                    |                   | 6.9                 | 1.7             | 6.2               | 5.9             | 4.4             | 5.4               | 4.6               | 5.1               | 4.8               | 5.6               | 3.6               |
| 3      | COD                | mg/l      | 250                  | 100               | 37                  | 122             | 33                | 27              | 34              | 73                | 25                | 17                | 11                | 32                | 28                |
| 4      | BOD                | mg/l      | 30                   | 33                | 15                  | 50*             | 9                 | 7               | 11              | 25                | 9                 | 5                 | 3                 | 8                 | 9                 |
| 5      | TSS                | mg/l      | 100                  | 52                | 27                  | 93              | 28                | 10              | 35              | 77                | 5                 | 25                | 9                 | 7                 | 7                 |
| 6      | NH <sub>3</sub> -N | mg/l      | 50                   | 3                 | 3                   | 4               | 3                 | 7               | 3               | 5                 | 5                 | 3                 | 3                 | 6                 | 10                |
| 7      | PO <sub>4</sub> -P | mg/l      | 5.0                  | 3.71              | 0.44                | 8.32            | 1.76              | 1.83            | 1.80            | 1.91              | 1.57              | BDL               | 3.80              | 1.50              | 3.10              |
| 8      | Total<br>Coliform  | MPN/100ml | -                    | $3.8 \times 10^4$ | $2.1 \times 10^{1}$ | $6.9\times10^4$ | $3.0 \times 10^3$ | $1.1\times10^4$ | $1.1\times10^3$ | $1.8 \times 10^3$ | $7.6\times10^3$   | $7.6 \times 10^4$ | $9.3 \times 10^3$ | $8.0 \times 10^4$ | $7.6 \times 10^4$ |
| 9      | Faecal<br>Coliform | MPN/100ml | -                    | $3.2 \times 10^4$ | $1.7 \times 10^{1}$ | $4.5\times10^4$ | $2.2\times10^3$   | $4.5\times10^3$ | $6.9\times10^2$ | $9.2\times10^2$   | $3.2 \times 10^3$ | $1.4\times10^4$   | $6.1\times10^3$   | $4.5\times10^4$   | $4.0 \times 10^4$ |

Table -3
STP Raipur Khurd-2018

| Sr.No. | Parameters         | Unit      | Permissible<br>Limit | Jan.            | Feb.            | March.          | April           | May | June | July            | Aug.                  | Sept                     | Oct.                  | Nov.                | Dec.            |
|--------|--------------------|-----------|----------------------|-----------------|-----------------|-----------------|-----------------|-----|------|-----------------|-----------------------|--------------------------|-----------------------|---------------------|-----------------|
| 1      | pН                 | -         | 5.5 to 9.0           | 7.8             | 7.5             | 7.5             | 7.3             | -   | -    | 7.3             | 7.2                   | 7.3                      | 7.6                   | 7.1                 | 7.3             |
| 2      | DO                 | mg/l      | -                    | 1.7             | 2.7             | 2.0             | 0.92            | -   | -    | NIL             | NIL                   | NIL                      | NIL                   | 0.48                | NIL             |
| 3      | COD                | mg/l      | 250                  | 187             | 254             | 262             | 215             | -   | -    | 223             | 245                   | 147                      | 195                   | 158                 | 167             |
| 4      | BOD                | mg/l      | 30                   | 84              | 103             | 95              | 90              | -   | -    | 84              | 114                   | 64                       | 59                    | 62                  | 69              |
| 5      | TSS                | mg/l      | 100                  | 87              | 79              | 57              | 88              | -   | -    | 147             | 141                   | 68                       | 95                    | 84                  | 56              |
| 6      | NH <sub>3</sub> -N | mg/l      | 50                   | 41              | 41              | 40              | 35              | -   | -    | 39              | 38                    | 41                       | 28                    | 26.00               | 31.00           |
| 7      | PO <sub>4</sub> -P | mg/l      | 5.0                  | 1.71            | 2.55            | 0.61            | 0.65            | -   | -    | 0.80            | 1.57                  | BDL                      | 1.20                  | 1.00                | 2.10            |
| 8      | Total<br>Coliform  | MPN/100ml | -                    | $4.0\times10^3$ | $4.1\times10^3$ | $7.6\times10^3$ | $6.9\times10^3$ | -   | -    | $4.0\times10^4$ | 4.5 × 10 <sup>4</sup> | 1.1 ×<br>10 <sup>5</sup> | 1.7 × 10 <sup>5</sup> | $3.0 \times 10^{5}$ | $1.4\times10^6$ |
| 9      | Faecal<br>Coliform | MPN/100ml | -                    | $2.0\times10^3$ | $2.0\times10^3$ | $5.4\times10^3$ | $4.0\times10^3$ | -   | -    | $1.4\times10^4$ | $1.4 \times 10^{4}$   | $4.5 \times 10^{4}$      | $1.1 \times 10^{5}$   | $1.8 \times 10^{5}$ | $4.5\times10^5$ |

Table-4
STP Raipur Kalan-2018

| Sr.No. | Parameters         | Unit      | Permissible<br>Limit | Jan.            | Feb.            | March               | April           | May                   | June              | July              | Aug.              | Sept.           | Oct.              | Nov.                | Dec.              |
|--------|--------------------|-----------|----------------------|-----------------|-----------------|---------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|-----------------|-------------------|---------------------|-------------------|
| 1      | pН                 | -         | 5.5 to 9.0           | 7.3             | 6.8             | 7.0                 | 7.0             | 7.0                   | 7.0               | 7.1               | 7.0               | 7.1             | 7.1               | 6.9                 | 7.1               |
| 2      | DO                 | mg/l      | -                    | 0.6             | NIL             | NIL                 | NIL             | NIL                   | NIL               | NIL               | NIL               | 0.4             | NIL               | NIL                 | NIL               |
| 3      | COD                | mg/l      | 250                  | 312             | 182             | 150                 | 110             | 147                   | 149               | 130               | 170               | 181             | 138               | 118                 | 145               |
| 4      | BOD                | mg/l      | 30                   | 122             | 82              | 77                  | 60              | 66                    | 69                | 47                | 84                | 60              | 59                | 59                  | 70                |
| 5      | TSS                | mg/l      | 100                  | 157             | 21              | 26                  | 25              | 49                    | 38                | 43                | 48                | 59              | 38                | 41                  | 22                |
| 6      | NH <sub>3</sub> -N | mg/l      | 50                   | 37              | 41              | 34                  | 27              | 29                    | 34                | 35                | 33                | 32              | 36                | 29                  | 43                |
| 7      | PO <sub>4</sub> -P | mg/l      | 5.0                  | 3.80            | 4.23            | 3.65                | 4.23            | 4.40                  | 4.23              | 3.95              | 2.61              | 3.50            | 3.80              | 3.50                | 4.70              |
| 8      | Total<br>Coliform  | MPN/100ml | -                    | $1.4\times10^4$ | $2.7\times10^3$ | $5.4\times10^3$     | $6.9\times10^3$ | 9.3 × 10 <sup>5</sup> | $2.0 \times 10^4$ | $4.0 \times 10^4$ | $3.2 \times 10^4$ | $1.7\times10^3$ | $4.5\times10^4$   | $1.4\times10^5$     | $3.2 \times 10^5$ |
| 9      | Faecal<br>Coliform | MPN/100ml | -                    | $1.1\times10^4$ | $1.7\times10^3$ | $4.0 \times 10^{3}$ | $4.5\times10^3$ | $6.9 \times 10^{5}$   | $1.1 \times 10^4$ | $7.6\times10^3$   | $8.3 \times 10^3$ | $1.4\times10^3$ | $2.0 \times 10^4$ | $9.3 \times 10^{4}$ | $2.7\times10^5$   |

Table -5
STP Dhanas-2018

| Sr.No. | Parameters         | Unit      | Permissible<br>Limit | Jan. | Feb.              | March | April | May               | June            | July              | Aug.                | Sept | Oct.              | Nov.                | Dec.              |
|--------|--------------------|-----------|----------------------|------|-------------------|-------|-------|-------------------|-----------------|-------------------|---------------------|------|-------------------|---------------------|-------------------|
| 1      | рН                 | -         | 5.5 to 9.0           | 8.0  | 7.9               | 7.6   | 7.5   | 7.3               | 7.4             | 7.7               | 7.6                 | 7.6  | 7.6               | 7.6                 | 7.2               |
| 2      | DO                 | mg/l      | -                    |      | 5.4               | 4.1   | 4.9   | 1.9               | 2.8             | 3.6               | 4.5                 | 5.9  | 5.2               | 5.3                 | 5.3               |
| 3      | COD                | mg/l      | 250                  | 84   | 86                | 124   | 67    | 65                | 41              | 33                | 36                  | 14   | 22                | 39                  | 62                |
| 4      | BOD                | mg/l      | 30                   | 21   | 17                | 33    | 24    | 26                | 13              | 12                | 87                  | 4    | 7                 | 10                  | 12                |
| 5      | TSS                | mg/l      | 100                  | 24   | 16                | 24    | 17    | 19                | 17              | 11                | 8                   | 17   | 6                 | 11                  | 10                |
| 7      | NH <sub>3</sub> -N | mg/l      | 50                   | 19   | 10                | 36    | 38    | 37                | 32              | 30                | 22                  | 10   | 12                | 13                  | 13                |
| 8      | PO <sub>4</sub> -P | mg/l      | 5.0                  | 0.82 | 0.39              | 0.78  | 0.97  | 0.51              | 0.65            | 0.53              | 0.40                | BDL  | 1.30              | BDL                 | 1                 |
| 9      | Total<br>Coliform  | MPN/100ml | -                    | 21   | $7.6\times10^3$   | 69    | 34    | $9.3 \times 10^3$ | $2.2\times10^3$ | $9.3 \times 10^4$ | $6.1 \times 10^{4}$ | 172  | $2.0 \times 10^4$ | $1.1\times10^5$     | $5.4 \times 10^4$ |
| 10     | Faecal<br>Coliform | MPN/100ml | -                    | 14   | $5.4 \times 10^3$ | 45    | 32    | $6.9\times10^3$   | $1.8\times10^3$ | $2.0 \times 10^4$ | $2.2\times10^4$     | 130  | $1.3 \times 10^4$ | $6.9 \times 10^{4}$ | $2.7 \times 10^4$ |

#### **Ground Water Quality:**

Chandigarh Pollution Control Committee Monitor the quality of ground water on half yearly basis. Now, as per direction of Executive Committee monitoring of Ground Water Quality will be done on quarterly basis.

The Data of ground water quality monitored by CPCC in year 2018 is given in Table 6.

#### Table -6 (Ground Water Quality) -2018

| Sr.No. | Parameters              | Desirable  | Units     | Dadu Majra |      | SE    | C-15 | SEC   | -22 | VI    | LL   | DHA   | NAS  | Sec   | -35  | Sec   | -20  |
|--------|-------------------------|------------|-----------|------------|------|-------|------|-------|-----|-------|------|-------|------|-------|------|-------|------|
|        |                         |            |           | April      | Oct  | April | Octr | April | Oct | April | Oct  | April | Oct  | April | Oct  | April | Oct  |
| 1      | Temp.                   |            | °C        | 21.5       | 24.0 | 22.0  | 24.5 | 22.0  |     | 22.0  | 24.0 | 22.5  | 24.0 | 22.0  | 24.0 | 20.5  | 24.0 |
| 2      | рН                      | 6.5 to 8.5 |           | 7.6        | 7.6  | 7.0   | 7.6  | 7.0   |     | 7.0   | 7.2  | 7.3   | 7.7  | 7.0   | 7.3  | 7.2   | 7.4  |
| 3      | Conductivity            |            | μs/cm     | 746        | 753  | 938   | 878  | 853   |     | 1181  | 1210 | 664   | 647  | 905   | 863  | 721   | 662  |
| 4      | BOD                     |            | mg/l      | <1         | <1   | <1    | <1   | <1    |     | <1    | 2    | <1    | <1   | <1    | <1   | <1    | <1   |
| 5      | COD                     |            | mg/l      | 9          | 21   | 4     | 21   | 8     |     | 7     | 28   | 10    | 17   | 8     | 24   | 7     | 21   |
| 6      | NO <sub>3</sub> -N      | 50         | mg/l      | 2.80       | 2.50 | 1.70  | 5.9  | 1.60  |     | 0.40  | <1   | 2.60  | 2.6  | 5.20  | 4.70 | 4.60  | 4.90 |
| 7      | NH <sub>3</sub> -N      |            | mg/l      | BDL        | 0.85 | 1.03  | 0.92 | 0.15  |     | 0.76  | 1.44 | 0.49  | 0.77 | BDL   | 0.55 | BDL   | 1.03 |
| 8      | Turbidity               | 5          | NTU       | 3          | 2    | 132   | 44   | 4     |     | 50    | 13   | 46    | 18   | 4     | 5    | 6     | 4    |
| 9      | P-alk                   |            | mg/l      | 14         | NIL  | 28    | NIL  | 18    |     | 16    | NIL  | 12    | NIL  | 18    | NIL  | 20    | NIL  |
| 10     | T-alk                   | 200        | mg/l      | 322        | 354  | 366   | 374  | 352   |     | 450   | 496  | 310   | 328  | 412   | 412  | 288   | 280  |
| 11     | Hardness as             | 300        | mg/l      | 294        | 240  | 262   | 180  | 294   |     | 244   | 160  | 204   | 180  | 314   | 200  | 278   | 260  |
| 12     | Ca as CaCO <sub>3</sub> | 75         | mg/l      | 224        | 146  | 142   | 90   | 274   |     | 212   | 72   | 182   | 116  | 256   | 116  | 228   | 174  |
| 13     | Mg as CaCO₃             | 30         | mg/l      | 70         | 94   | 120   | 90   | 20    |     | 32    | 88   | 22    | 64   | 58    | 84   | 50    | 86   |
| 14     | Sulphate                | 200        | mg/l      | 35         | 39   | 55    | 50   | 33    |     | 66    | 72   | 18    | 22   | 34    | 39   | 51    | 51   |
| 15     | TDS                     | 500        | mg/l      | 394        | 656  | 590   | 769  | 421   |     | 627   | 765  | 353   | 368  | 489   | 528  | 388   | 398  |
| 16     | Total Fixed             |            | mg/l      | 355        | 370  | 567   | 460  | 436   |     | 616   | 552  | 270   | 258  | 398   | 378  | 331   | 310  |
| 17     | TSS                     |            | mg/l      | 4          | 4    | 147   | 8    | 9     |     | 8     | 7    | 17    | 7    | 2     | 4    | 3     | 5    |
| 18     | Fluoride                | 1          | mg/l      | 0.85       | 0.77 | 0.14  | 0.31 | 0.46  |     | 0.34  | 0.28 | BDL   | BDL  | 0.20  | 0.37 | 0.90  | 0.88 |
| 19     | Chloride                | 250        | mg/l      | 50         | 35   | 45    | 45   | 45    |     | 80    | 85   | 20    | 18   | 27    | 28   | 23    | 16   |
| 20     | Phosphate               |            | mg/l      | 0.02       | BDL  | 0.35  | BDL  | 0.01  |     | 0.05  | BDL  | 0.01  | BDL  | 0.02  | BDL  | 0.04  | BDL  |
| 21     | Colour                  |            |           | <5         | <5   | 10    | 10   | <5    |     | 10    | 10   | 10    | <5   | <5    | <5   | <5    | <5   |
| 22     | Boron                   |            | mg/l      | 0.07       | <1   | 0.05  | <1   | 0.06  |     | 0.11  | <1   | 0.07  | <1   | 0.07  | <1   | 0.06  | <1   |
| 23     | TKN                     |            | mg/l      | BDL        | <1   | BDL   | <1   | BDL   |     | BDL   | <1   | BDL   | <1   | BDL   | <1   | BDL   | <1   |
| 24     | Sodium                  |            | mg/l      | 51         | 49   | 38    | 32   | 42    |     | 128   | 128  | 41    | 36   | 38    | 28   | 44    | 39   |
| 25     | potassium               |            | mg/l      | BDL        | 1    | 3     | 3    | 1     |     | 5     | 5    | 2     | 2    | 2     | 2    | BDL   | <1   |
| 26     | Fecal Coliform          |            | MPN/100ml | 34         | <2   |       | <2   | 22    |     |       | 11   | 84    | <2   | <2    | <2   | <2    | <2   |
| 27     | Total Coliform          |            | MPN/100ml | 39         | <2   |       | 7    | 26    |     |       | 32   | 94    | <2   | <2    | <2   | <2    | <2   |

| Sr.No. | Parameters           | Parameters Units Dadu Majra SEC-15 SEC-22 |       | 22   | VIL<br>PALSO |      | DHAN  | NAS  | Sec -3 | 35   | Sec -20 |      |       |      |       |      |
|--------|----------------------|---|-------|------|--------------|------|-------|------|--------|------|---------|------|-------|------|-------|------|
|        |                      |   | April | Oct. | April        | Oct. | April | Oct. | April  | Oct. | April   | Oct. | April | Oct. | April | Oct. |
| 28     | ARSENIC              | mg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 29     | CADMIUM              | mg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 30     | COPPER               | mg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 31     | LEAD                 | mg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 32     | NICKEL               | mg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 33     | ZINC                 | mg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 34     | MERCURY              | mg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 35     | IRON                 | mg/l                                      | 0.43  |      | 0.78         |      | 0.92  |      | 1.2    |      | 2.1     |      | 0.09  |      | 0.84  |      |
| 36     | CHROMIUM<br>(TOTAL)  | mg/l                                      | BDL   | 1    | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 37     | Alpha BHC            | μg/l                                      | BDL   | -    | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 38     | Beta BHC             | μg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 39     | Gama BHC (Lindane)   | μg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 40     | OP DDT               | μg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 41     | PP DDT               | μg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 42     | Alpha Endosulphan    | μg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 43     | Beta Endosulphan     | μg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 44     | Dieldrin             | μg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 45     | Carboryl (Carbamate) | μg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 46     | 2.4 D                | μg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 47     | Aldrin               | μg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 48     | Malathian            | μg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 49     | Methyl Parathian     | μg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 50     | Anilophos            | μg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |
| 51     | Chloropyriphos       | μg/l                                      | BDL   |      | BDL          |      | BDL   |      | BDL    |      | BDL     |      | BDL   |      | BDL   |      |

#### Water quality of River Ghaggar:

Although river Ghaggar is not flowing through Chandigarh. It is passing around 7.0 Km away from Chandigarh but still CPCC from time to time has collected the samples from River Ghaggar after Sukhna Choe joins river ghaggar near Mubarakpur in Punjab. The water quality of River Ghaggar near confluence point at Mubarakpur, Punjab is given in Table -7

Table -7

<u>Quality of River Ghaggar - 2018</u>

| Date of    | рН  | COD  | BOD  | TSS  | NH <sub>3</sub> -N | PO <sub>4</sub> -P | Chloride |
|------------|-----|------|------|------|--------------------|--------------------|----------|
| monitoring | -   | mg/l | mg/l | mg/l | mg/l               | mg/l               | mg/l     |
| 18.04.18   | 7.4 | 159  | 27   | 2294 | 4.21               | 1.2                | 45       |
| 23.10.18   | 7.8 | 20   | 4    | 138  | 2.58               | BDL                | -        |
| 19.11.18   | 7.6 | 53   | 17   | 649  | 7.16               | BDL                | 23       |
| 03.12.18   | 7.4 | 83   | 17   | 391  | 4.32               | 1.7                | -        |

#### **Quality of Drains:**

Chandigarh Pollution Control Committee monitors the quality of waste water of Sukhna Choe and N-Choe at the exit point of Chandigarh. Data of which is as given below.

Sukhna Choe : Table 8 N-Choe : Table 9

#### Table 8 (Sukhna Choe Entry Point) - 2018

| Sr.No. | Parameters              | Unit    | Jan.               | Feb.              | March.            | April                 | May  | June | July | Aug. | Sept. | Oct | Nov. | Dec. |
|--------|-------------------------|---------|--------------------|-------------------|-------------------|-----------------------|------|------|------|------|-------|-----|------|------|
| 1      | рН                      | -       | 7.3                | 7.5               | 7.6               | 7.5                   | 7.5  | 7.3  | 7.0  | 7.4  | 7.5   | 7.5 | 7.5  | 7.3  |
| 2      | Conductivity            | μs/cm   | 1288               | 1084              | 1069              | 1119                  | 1050 | 952  |      |      |       |     |      |      |
| 3      | DO                      | mg/l    | 2.5                | 2.8               | 2.0               | 2.3                   | 2.1  | 1.3  | 2.7  | NIL  | 1.4   | 1.4 | 2.1  | 2.0  |
| 4      | COD                     | mg/l    | 302                | 476               | 446               | 435                   | 360  | 279  | 23   | 237  | 455   | 353 | 463  | 584  |
| 5      | BOD                     | mg/l    | 92                 | 252               | 245               | 193                   | 179  | 162  | 13   | 165  | 227   | 230 | 216  | 301  |
| 6      | NO <sub>3</sub> -N      | mg/l    | 1.2                |                   | 1.4               | 3.20                  |      | -    |      | -    |       |     |      |      |
| 7      | NH <sub>3</sub> -N      | mg/l    | 47                 | 35                | 41                | 37                    | 41   | 37   | 31   | 38   | 19    | 37  | 36   | 49   |
| 8      | Phosphate               | mg/l    | 5.58               | 4.14              | 3.8               | 3.9                   | 5.60 | 3.53 | 3.15 | 3.82 | 5.00  | 4.3 | 5.10 | 5.6  |
| 9      | Total Suspended Solid   | mg/l    | 154                | 123               | 132               | 182                   | 89   | 93   | 49   | 120  | 165   | 82  | 125  | 217  |
| 10     | TDS                     | mg/l    | 646                | 591               | 601               | 656                   | 617  | 622  |      | 1    |       |     |      |      |
| 11     | TFS                     | mg/l    | 461                | 424               | 502               | 491                   | 431  | 420  |      | 1    |       |     |      |      |
| 12     | Turbidity               | NTU     | 190                | 230               | 240               | 280                   | 220  | 165  |      | -    |       |     |      |      |
| 13     | TH as CaCO <sub>3</sub> | mg/l    | 220                | 272               | 260               | 266                   | 242  | 266  |      |      |       |     |      |      |
| 14     | Ca as CaCO <sub>3</sub> | mg/l    | 168                | 170               | 156               | 144                   | 132  | 160  |      |      |       |     |      |      |
| 15     | Mg as CaCO <sub>3</sub> | mg/l    | 52                 | 102               | 104               | 122                   | 110  | 106  |      |      |       |     |      |      |
| 16     | Sulphate                | mg/l    | 79                 | 80                | 77                | 70                    | 64   | 54   |      |      |       |     |      |      |
| 17     | Chloride                | mg/l    | 81                 | 80                | 58                | 105                   | 59   | 50   |      |      |       |     |      |      |
| 18     | P-Alkalinity            | mg/l    | NIL                | NIL               | NIL               | NIL                   | NIL  | NIL  |      |      |       |     |      |      |
| 19     | Total alkalinity as     | mg/l    | 506                | 456               | 464               | 242                   | 486  | 430  |      | 1    |       |     |      |      |
| 20     | Fluoride                | mg/l    | BDL                | 0.13              | BDL               | 0.15                  | 0.15 | 0.22 |      |      |       |     |      |      |
| 21     | colour                  | Hazen   | 40                 | 50                | 30                | 30                    | 30   | 40   |      | -    |       |     |      |      |
| 22     | Boron(B)                | mg/l    | 0.10               | 0.21              | 0.23              | 0.24                  | 0.23 | 0.21 |      |      |       |     |      |      |
| 23     | TKN                     | mg/l    | <1                 | <1                | BDL               | 9.5                   |      |      |      |      |       |     |      |      |
| 24     | Potassium               | mg/l    | 6                  | 6                 | 4                 | 3                     |      | -    |      | -    |       |     |      |      |
| 25     | Sodium                  | mg/l    | 27                 | 29                | 17                | 15                    |      |      |      |      |       |     |      |      |
| 26     | Total Coliform          | MPN/100 | $1.1 \times 10^4$  | $3.2 \times 10^4$ | $6.9 \times 10^4$ | $2.2 \times 10^{6}$   |      | -    |      |      |       |     |      |      |
| 27     | Feacal Coliform         | MPN/100 | $8.09 \times 10^3$ | $2.7 \times 10^4$ | $4.0 \times 10^4$ | 1.8 × 10 <sup>6</sup> |      |      |      |      |       |     |      |      |

Table 8.1 (Sukhna Choe Exit Point) - 2018

| Sr.<br>No. | Parameters                                  | Unit        | Jan.                  | Feb.                  | March                 | April                 | May                   | June                  | July                  | Aug.                  | Sept.                 | Oct                   | Nov.                  | Dec.                  |
|------------|---|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1          | рН  | -           | 7.3                   | 7.3                   | 7.5                   | 7.2                   | 7.2                   | 7.3                   | 7.2                   | 7.5                   | 7.6                   | 7.6                   | 7.0                   | 7.5                   |
| 2          | Conductivity                                | μs/cm       | 930                   | 971                   | 959                   | 950                   | 954                   | 888                   | 810                   | 918                   | 719                   | 1010                  | 956                   | 1018                  |
| 3          | DO  | mg/l        | 0.83                  | NIL                   | NIL                   | NIL                   | NIL                   | NIL                   | 2.2                   | NIL                   | NIL                   | NIL                   | NIL                   | NIL                   |
| 4          | COD   | mg/l        | 423                   | 508                   | 546                   | 242                   | 264                   | 301                   | 148                   | 242                   | 163                   | 321                   | 362                   | 386                   |
| 5          | BOD   | mg/l        | 195                   | 267                   | 270                   | 125                   | 123                   | 167                   | 64                    | 179                   | 75                    | 207                   | 133                   | 220                   |
| 6          | NO <sub>3</sub> -N                          | mg/l        | 1.30                  |                       | 1.10                  | 2.10                  | 1.30                  | 4.30                  | 2.40                  | 4.20                  | 2.60                  | 1.10                  | 1.90                  | 2.30                  |
| 7          | NH <sub>3</sub> -N                          | mg/l        |                       | 31                    | 34                    | 33                    | 31                    | 27                    | 20                    | 32                    | 24                    | 30                    | 33                    | 41                    |
| 8          | Phosphate                                   | mg/l        |                       | 3.34                  | 3.21                  | 3.68                  | 3.94                  | 2.45                  | 2.12                  | 2.46                  | 1.40                  | 2.80                  | 2.60                  | 3.60                  |
| 9          | TSS   | mg/l        | 261                   | 317                   | 418                   | 148                   | 159                   | 147                   | 180                   | 136                   | 139                   | 295                   | 250                   | 408                   |
| 10         | TDS   | mg/l        | 441                   | 533                   | 464                   | 452                   | 493                   | 520                   | 199                   | 580                   | 517                   | 580                   | 488                   | 464                   |
| 11         | TFS   | mg/l        | 367                   | 453                   | 565                   | 454                   | 450                   | 439                   | 283                   | 547                   | 425                   | 426                   | 438                   | 424                   |
| 12         | Turbidity                                   | NTU         | 195                   | 270                   | 320                   | 210                   | 190                   | 180                   | 300                   | 160                   | 148                   | 155                   | 170                   | 220                   |
| 13         | TH as<br>CaCO₃                              | mg/l        | 260                   | 258                   | 270                   | 270                   | 264                   | 250                   | 106                   | 236                   | 240                   | 268                   | 250                   | 270                   |
| 14         | Ca as CaCO <sub>3</sub>                     | mg/l        | 160                   | 160                   | 160                   | 160                   | 152                   | 140                   | 84                    | 162                   | 130                   | 150                   | 150                   | 160                   |
| 15         | Mg as<br>CaCO₃                              | mg/l        | 100                   | 98                    | 110                   | 110                   | 112                   | 110                   | 22                    | 74                    | 120                   | 118                   | 100                   | 110                   |
| 16         | Sulphate                                    | mg/l        | 72                    | 76                    | 85                    | 57                    | 64                    | 61                    | 55                    | 53                    | 52                    | 67                    | 48                    | 63                    |
| 17         | Chloride                                    | mg/l        | 52                    | 55                    | 47                    | 70                    | 61                    | 57                    | 33                    | 56                    | 45                    | 53                    | 61                    | 41                    |
| 18         | P-Alkalinity                                | mg/l        | NIL                   | NIL                   | NIL                   | 16                    | NIL                   |
| 19         | Total<br>alkalinity as<br>CaCO <sub>3</sub> | mg/l        | 506                   | 514                   | 420                   | 406                   | 446                   | 378                   | 322                   | 398                   | 308                   | 422                   | 396                   | 418                   |
| 20         | Fluoride                                    | mg/l        | BDL                   | BDL                   | BDL                   | BDL                   | 0.07                  | 0.20                  | 0.12                  | 0.13                  | 0.15                  | 0.21                  | 0.13                  | 0.22                  |
| 21         | colour                                      | Haze<br>n   | 30                    | 40                    | 50                    | 30                    | 40                    | 30                    | 30                    | 40                    | 40                    | 40                    | 40                    | 40                    |
| 22         | Boron(B)                                    | mg/l        | 0.15                  | 0.30                  | 0.28                  | 0.24                  | 0.22                  | 0.23                  | 0.24                  | 0.25                  | 0.16                  | <1                    | <1                    | <1                    |
| 23         | TKN   | mg/l        | 2.90                  | 3.2                   | 2.90                  | 1.50                  | 3.30                  | 3.90                  | 1.90                  | 3.70                  | 2.30                  | 3.10                  | 7.30                  | 6.10                  |
| 24         | Potassium                                   | mg/l        | 4                     | 5                     | 6                     | 6                     | 7                     | 7                     | 5                     | 9                     | 6                     | 8                     | 9                     | 12                    |
| 25         | Sodium                                      | mg/l        | 23                    | 28                    | 20                    | 17                    | 23                    | 26                    | 16                    | 31                    | 17                    | 20                    | 48                    | 17                    |
| 26         | Total<br>Coliform                           | MPN/<br>100 | 1.4 × 10 <sup>5</sup> | 7.6 × 10 <sup>4</sup> | 2.7 × 10 <sup>4</sup> | 3.2 × 10 <sup>4</sup> | 7.6 × 10 <sup>6</sup> | 4.5 × 10 <sup>6</sup> | 9.3 × 10 <sup>4</sup> | 7.6 × 10 <sup>4</sup> | 1.0 × 10 <sup>6</sup> | 1.4× 10 <sup>6</sup>  | 4.5× 10 <sup>6</sup>  | 3.8× 10 <sup>6</sup>  |
| 27         | Faecal<br>Coliform                          | MPN/<br>100 | 1.1 × 10 <sup>4</sup> | 5.4 × 10 <sup>4</sup> | 1.7 × 10 <sup>4</sup> | 2.2 × 10 <sup>4</sup> | 3.2 × 10 <sup>6</sup> | 1.2 × 10 <sup>6</sup> | 6.9 × 10 <sup>4</sup> | 5.4 × 10 <sup>4</sup> | $7.6 \times 10^{5}$   | 4.5 × 10 <sup>5</sup> | 6.9 × 10 <sup>5</sup> | 5.4 × 10 <sup>5</sup> |

## Table -9 (N-Choe Entry Point) - 2018

| Sr.No. | Parameters                            | Unit    | Jan. | Feb. | March. | April | May  | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|--------|---------------------------------------|---------|------|------|--------|-------|------|------|------|------|-------|------|------|------|
| 1      | pН                                    | -       | 7.8  | 7.7  | 7.7    | 7.2   | 7.1  | 7.5  | 7.5  | 7.6  | 7.6   | 7.5  | 7.8  | 7.4  |
| 2      | Conductivity                          | μs/cm   | 341  | 307  | 329    | 325   | 356  | 295  | 405  |      |       |      |      |      |
| 3      | DO                                    | mg/l    | 7.6  | 8.1  | 7.6    | 6.9   | 6.8  | 6.5  | 6.3  | 6.0  | 6.2   | 6.8  | 7.1  | 7.6  |
| 4      | COD                                   | mg/l    | 7    | 27   | 28     | 30    | 22   | 15   | 20   | 18   | 10    | 12   | 14   | 18   |
| 5      | BOD                                   | mg/l    | 2    | 1    | 2      | 3     | 2    | 2    | 2    | 2    | 1     | 2    | 2    | 2    |
| 6      | NO <sub>3</sub> -N                    | mg/l    | 1.60 |      | 3.40   | 3.00  | -    |      |      | -    | -     | -    |      |      |
| 7      | NH <sub>3</sub> -N                    | mg/l    | 0.02 | 0.11 | BDL    | 0.26  | 0.29 | 0.51 | 0.54 | 0.34 | 0.57  | 0.62 | 0.59 | 0.37 |
| 8      | Phosphate                             | mg/l    | 0.03 | 0.03 | 0.05   | 0.04  | 0.07 | 0.08 | 0.08 | 0.07 | BDL   | 0.08 | BDL  | 0.05 |
| 9      | TSS                                   | mg/l    | 9    | 2    | 8      | 12    | 27   | 12   | 16   | 7    | 24    | 22   | 13   | 10   |
| 10     | TDS                                   | mg/l    | 186  | 159  | 155    | 181   | 205  | 209  |      | 1    | 1     | 1    |      |      |
| 11     | TFS                                   | mg/l    | 133  | 51   | 74     | 146   | 227  | 165  |      | 1    | 1     | 1    |      |      |
| 12     | Turbidity                             | NTU     | 4    | 12   | 23     | 22    | 20   | 30   |      | 1    | 1     | 1    |      |      |
| 13     | TH as CaCO <sub>3</sub>               | mg/l    | 162  | 184  | 180    | 150   | 152  | 148  |      | 1    | 1     | 1    |      |      |
| 14     | Ca as CaCO <sub>3</sub>               | mg/l    | 114  | 130  | 120    | 80    | 70   | 92   |      | -    | -     | -    |      |      |
| 15     | Mg as CaCO₃                           | mg/l    | 48   | 54   | 60     | 70    | 82   | 56   |      |      |       |      |      |      |
| 16     | Sulphate                              | mg/l    | 23   | 24   | 27     | 28    | 23   | 29   |      |      |       | -    |      |      |
| 17     | Chloride                              | mg/l    | 12   | 27   | 15     | 20    | 10   | 27   |      |      |       | -    |      |      |
| 18     | Total alkalinity as CaCO <sub>3</sub> | mg/l    | 154  | 114  | 134    | 142   | 166  | 110  |      |      |       | -    |      |      |
| 19     | P-Alkalinity                          | mg/l    | 4    | 4    | 6      | NIL   | NIL  | NIL  |      | 1    | 1     | 1    |      |      |
| 20     | Fluoride                              | mg/l    | 0.08 | BDL  | BDL    | 0.13  | 0.09 | 0.18 |      | 1    | 1     | 1    |      |      |
| 21     | colour                                | Hazen   | 5    | 5    | 5      | 5     | 5    | 5    |      | 1    | 1     | 1    |      |      |
| 22     | Boron(B)                              | mg/l    | 0.09 | 0.10 | 0.13   | 0.11  | 0.14 | <1   |      | -    | -     | -    |      |      |
| 23     | TKN                                   | mg/l    | 1.2  | 1.2  | 1.4    | 1.2   |      |      |      |      | -     | -    |      |      |
| 24     | Potassium                             | mg/l    | 2    | 2    | 3      | 2     |      |      |      |      | -     | -    |      |      |
| 25     | Sodium                                | mg/l    | 12   | 7    | 6      | 6     | -    |      |      | 1    | 1     | 1    |      |      |
| 26     | TOTAL COLIFORM                        | MPN/100 | 5    | <2   | 39     | 21    |      |      |      |      |       |      |      |      |
| 27     | FAECAL COLIFORM                       | MPN/100 | 4    | <2   | 26     | 17    |      |      |      |      |       |      |      |      |

Table - 9.1 (N-Choe (Exit Point) - 2018

| Sr.No. | Parameters                | Unit          | Jan.                  | Feb.                  | March                 | April                 | May                   | June                  | July                     | Aug.                  | Sept.                 | Oct.                  | Nov.                  | Dec.                  |
|--------|---------------------------|---------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1      | рН                        | -             | 6.6                   | 6.9                   | 7.1                   | 7.3                   | 7.1                   | 6.9                   | 7.1                      | 7.1                   | 7.4                   | 7.4                   | 7.0                   | 7.1                   |
| 2      | Conductivity              | μs/cm         | 644                   | 551                   | 668                   | 663                   | 643                   | 638                   | 616                      | 559                   | 724                   | 584                   | 611                   | 696                   |
| 3      | DO                        | mg/l          | NIL                   | 0.6                   | 1.0                   | 0.7                   | NIL                   | NIL                   | NIL                      | NIL                   | NIL                   | NIL                   | NIL                   | NIL                   |
| 4      | COD                       | mg/l          | 261                   | 261                   | 214                   | 176                   | 168                   | 141                   | 164                      | 82                    | 114                   | 160                   | 204                   | 228                   |
| 5      | BOD                       | mg/l          | 161                   | 117                   | 98                    | 80                    | 73                    | 65                    | 77                       | 49                    | 82                    | 79                    | 65                    | 69                    |
| 6      | NO <sub>3</sub> -N        | mg/l          | 5.90                  |                       | 2.40                  | 2.10                  | 2.00                  | 2.20                  | 2.40                     | 2.80                  | 1.20                  | 1.50                  | 2.00                  | 6.30                  |
| 7      | NH <sub>3</sub> -N        | mg/l          | 23                    | 17                    | 20                    | 17                    | 24                    | 18                    | 22                       | 15                    | 19                    | 23                    | 23                    | 29                    |
| 8      | Phosphate                 | mg/l          | 2.55                  | 2.05                  | 2.05                  | 2.36                  | 2.51                  | 1.83                  | 2.01                     | 1.03                  | 1.40                  | 2.40                  | 2.40                  | 3.30                  |
| 9      | TSS                       | mg/l          | 100                   | 149                   | 82                    | 81                    | 105                   | 82                    | 80                       | 62                    | 37                    | 100                   | 120                   | 113                   |
| 10     | TDS                       | mg/l          | 326                   | 259                   | 350                   | 394                   | 297                   | 317                   | 342                      | 345                   | 390                   | 384                   | 300                   | 318                   |
| 11     | TFS                       | mg/l          | 267                   | 269                   | 236                   | 273                   | 310                   | 271                   | 274                      | 289                   | 317                   | 280                   | 248                   | 324                   |
| 12     | Turbidity                 | NTU           | 110                   | 160                   | 118                   | 125                   | 109                   | 95                    | 113                      | 92                    | 96                    | 112                   | 119                   | 112                   |
| 13     | TH as CaCO <sub>3</sub>   | mg/l          | 190                   | 206                   | 230                   | 212                   | 220                   | 194                   | 214                      | 210                   | 242                   | 220                   | 220                   | 220                   |
| 14     | Ca as CaCO <sub>3</sub>   | mg/l          | 118                   | 100                   | 120                   | 120                   | 124                   | 116                   | 122                      | 120                   | 138                   | 128                   | 142                   | 140                   |
| 15     | Mg as CaCO₃               | mg/l          | 72                    | 106                   | 110                   | 92                    | 96                    | 78                    | 92                       | 90                    | 104                   | 92                    | 78                    | 80                    |
| 16     | Sulphate                  | mg/l          | 66                    | 72                    | 49                    | 52                    | 52                    | 51                    | 62                       | 54                    | 63                    | 68                    | 74                    | 66                    |
| 17     | Chloride                  | mg/l          | 42                    | 45                    | 50                    | 45                    | 48                    | 46                    | 45                       | 42                    | 42                    | 40                    | 41                    | 40                    |
| 18     | Total alkalinity as CaCO₃ | mg/l          | 260                   | 208                   | 252                   | 258                   | 254                   | 246                   | 246                      | 224                   | 264                   | 234                   | 266                   | 282                   |
| 19     | P-Alkalinity              | mg/l          | NIL                      | NIL                   | NIL                   | NIL                   | NIL                   | NIL                   |
| 20     | Fluoride                  | mg/l          | 0.28                  | BDL                   | BDL                   | BDL                   | BDL                   | BDL                   | 0.13                     | 0.14                  | 0.13                  | <1                    | 0.12                  | 0.12                  |
| 21     | colour                    | Hazen         | 30                    | 20                    | 20                    | 20                    | 20                    | 20                    | 20                       | 20                    | 30                    | 30                    | 30                    | 30                    |
| 22     | Boron(B)                  | mg/l          | 0.19                  | 0.21                  | 0.15                  | 0.14                  | 0.14                  | <1                    | 0.12                     | 0.15                  | 0.08                  | <1                    | <1                    | <1                    |
| 23     | TKN                       | mg/l          | 4.20                  | 4.70                  | 4.20                  | 4.10                  | 3.90                  | 4.30                  | 4.90                     | 4.90                  | 5.30                  | 4.90                  | 26                    | 10.90                 |
| 24     | Potassium                 | mg/l          | 7                     | 9                     | 11                    | 8                     | 8                     | 9                     | 10                       | 10                    | 11                    | 12                    | 22                    | 2                     |
| 25     | Sodium                    | mg/l          | 23                    | 27                    | 37                    | 30                    | 24                    | 38                    | 43                       | 43                    | 47                    | 28                    | 17                    | 39                    |
| 26     | Total Coliform            | MPN/100<br>ml | 2.2 × 10 <sup>4</sup> | 3.2 × 10 <sup>4</sup> | 1.4 × 10 <sup>6</sup> | 6.1 × 10 <sup>5</sup> | 2.2 × 10 <sup>6</sup> | 1.7 × 10 <sup>5</sup> | 5.4 ×<br>10 <sup>5</sup> | 2.7 × 10 <sup>5</sup> | 2.7 × 10 <sup>6</sup> | $2.7 \times 10^{6}$   | 1.8 × 10 <sup>7</sup> | 7.6 × 10 <sup>6</sup> |
| 27     | Faecal Coliform           | MPN/100<br>ml | 1.8 × 10 <sup>4</sup> | 2.0 × 10 <sup>4</sup> | 9.3 × 10 <sup>5</sup> | $4.1 \times 10^{5}$   | 1.1 × 10 <sup>6</sup> | 1.4 × 10 <sup>5</sup> | 4.0 × 10 <sup>5</sup>    | 1.4 × 10 <sup>5</sup> | 8.6 × 10 <sup>5</sup> | 8.0 × 10 <sup>5</sup> | 8.0 × 10 <sup>6</sup> | 1.1 × 10 <sup>5</sup> |

# 7. The detail of pollution load in river Ghaggar and Its tributaries within the jurisdiction of the State/UT).

| A map (preferably digital map)        | Mentioned above Figure 1 & Figure 2                     |  |  |  |
|---------------------------------------|---|--|--|--|
| showing the sources of pollution      |   |  |  |  |
| area-wise information relating to-    | Chandigarh Population - 10.54 Lacs (as per 2011 census) |  |  |  |
| population                            | per 2011 defidual)                                      |  |  |  |
| water consumption in MLD              | 304 MLD   |  |  |  |
|                                       |   |  |  |  |
| sewage generation in MLD              | 245 MLD   |  |  |  |
| existing STPs with numbers and        | 1. Diggian 136.2 MLD                                    |  |  |  |
| exiting sewage treatment capacity     | 2. 3 BRD 49.94 MLD                                      |  |  |  |
|                                       | 3. Raipur Kalan 22.7 MLD                                |  |  |  |
| in MLD                                | 4. Raipur Khurd 5.675 MLD                               |  |  |  |
|                                       | 5. Dhanas 7.26 MLD                                      |  |  |  |
| proposed STPs- Nos with treatment     | Maloya 22.7 MLD   |  |  |  |
| capacity in MLD                       | Raipur Kalan 5.6 MLD                                    |  |  |  |
| acquaity in the                       | Kishangarh near 2.0 MLD                                 |  |  |  |
|                                       | Sukhna Lake   |  |  |  |
| drains contributing to pollution load | Data placed in Table 1 & 2                              |  |  |  |
| in river Ghaggar                      |   |  |  |  |
| L                                     |   |  |  |  |

### 8. The detail of Industrial Pollution as well STPs etc.

| A map (preferably digital map) showing the sources of Industrial pollution | No industrial waste water is being discharged directly into River Ghaggar and industries are allowed to discharge waste water only after treatment which discharged into sewerage system ultimately reaches to Terminal Sewage Treatment Plant for further treatment.                         |  |  |  |  |  |  |
|--|---|--|--|--|--|--|--|
| Area-wise information relating to— sector-wise no. of industries           | Being a Planned city Chandig<br>Industrial Area and most of the in<br>in Industrial Area Phase-I or Industexcept Hotel/Restaurant/Hospital<br>sectors<br>the details of industries in Chandig<br>Red Category - 192<br>Orange Category - 575<br>Green Category - 577<br>White Category - 1625 | ndustries are either strial Area Phase-II s etc which are in |  |  |  |  |  |
|  | Electroplating  | 98   |  |  |  |  |  |
|  | Foundries   | 33   |  |  |  |  |  |
|  | Hotel & Restaurants   | 229  |  |  |  |  |  |
|  | Sewage Treatment Plants   | 05   |  |  |  |  |  |
|  | Potable Alcohol's bottling  | 10   |  |  |  |  |  |

|                            | - I I I I I I I I I I I I - I | <u> </u>      |              |  |  |  |  |
|----------------------------|---|---------------|--------------|--|--|--|--|
|                            | plants  |               | 0.1          |  |  |  |  |
|                            | Automobile Service Station  | ons           | 91           |  |  |  |  |
|                            | Hospitals   |               | 44           |  |  |  |  |
|                            | Wire Drawing with Picklin   |               | 48           |  |  |  |  |
|                            | Wire Drawing without Pic  |               | 07           |  |  |  |  |
|                            | Slaughter House (Abattoi  | r)            | 01           |  |  |  |  |
|                            | Zinc processing units   |               | 03           |  |  |  |  |
|                            | Microbreweries  |               | 11           |  |  |  |  |
| Sector-wise total water    |   |               |              |  |  |  |  |
| consumption in MLD         | [   |               | ٦            |  |  |  |  |
|                            | Electroplating  | 0.371         | _            |  |  |  |  |
|                            | Foundries   | 0.053         |              |  |  |  |  |
|                            | Hotel & Restaurants   | 5.498         |              |  |  |  |  |
|                            | Potable Alcohol's   | 0.352         |              |  |  |  |  |
|                            | bottling plants   |               |              |  |  |  |  |
|                            | Automobile Service  | 0.479         |              |  |  |  |  |
|                            | Stations  |               | ]            |  |  |  |  |
|                            | Hospitals   | 1.212         |              |  |  |  |  |
|                            | Slaughter House   | 0.048         |              |  |  |  |  |
|                            | (Abattoir)  |               |              |  |  |  |  |
|                            | Microbreweries  | 0.300         |              |  |  |  |  |
|                            |   |               | _            |  |  |  |  |
|                            |   |               |              |  |  |  |  |
| Sector-wise industrial     | Floatroplating  | 0.161         |              |  |  |  |  |
|                            | Electroplating  |               | _            |  |  |  |  |
| effluent generation in MLD | Foundries   | 0.001         | _            |  |  |  |  |
| MILD                       | Hotel & Restaurants   | 0.176         |              |  |  |  |  |
|                            | Potable Alcohol's   | 0.022         |              |  |  |  |  |
|                            | bottling plants   |               | _            |  |  |  |  |
|                            | Automobile Service  | 0.127         |              |  |  |  |  |
|                            | Stations  |               |              |  |  |  |  |
|                            | Hospitals   | 0.387         |              |  |  |  |  |
|                            | Slaughter House   | 0.001         |              |  |  |  |  |
|                            | (Abattoir)  |               |              |  |  |  |  |
|                            | Microbreweries  | 0.048         |              |  |  |  |  |
|                            |   |               |              |  |  |  |  |
|                            |   |               |              |  |  |  |  |
| Existing capacity of       | All the units which require   | to treat was  | te water are |  |  |  |  |
| captive ETPs and           | having captive ETPs excep   | t Restaurant  | however, all |  |  |  |  |
| CETPs in MLD               | the restaurant are equippe  | ed with oil & | grease trap  |  |  |  |  |
|                            | as per the mandate of noti  | fication of M | oEF&CC. At   |  |  |  |  |
|                            | present there is no CETP ir   |               |              |  |  |  |  |
|                            | M. district Orange in Col   | - 12 - 1      |              |  |  |  |  |
| Sludge generated from      | Municipal Corporation, Cha  | •             |              |  |  |  |  |
| STPs as well as            | Department, Chandigarh A  |               |              |  |  |  |  |
| •                          | '   |               |              |  |  |  |  |
| management                 | received from Engineering   |               |              |  |  |  |  |
|                            | Administration. Municipal   |               |              |  |  |  |  |
|                            | has informed that their STF   |               |              |  |  |  |  |
|                            | private contractor and disp   |               |              |  |  |  |  |
|                            | with them and being lifted  | accordingly   | . No turther |  |  |  |  |

| information was provided by MCC.  |
|---|
| Sludge from ETPs of Industrial units which is not hazardous is being disposed with municipal waste and sludge which is hazardous in nature in being disposed through TSDF Nimbua. |

## 9. Observations on Gap Analysis etc.

| Observations on Gap Analysis w.r.to   |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|
| Sewage management   | Total Sewage Generated : 245 MLD Treatment capacity : 221 MLD Gap (245-221) : 24 MLD   |  |  |  |  |  |  |
| Industrial effluent management  | All the industries which are required to treat their waste water are allowed to operate only after having proper ETP hence, there is no gap.                   |  |  |  |  |  |  |
| Operation and maintenance of existing STPs  | Existing STPs are being maintained by MCC and Engg. Deptt. by themselves or through private contractors.   |  |  |  |  |  |  |
| operation and maintenance of existing captive ETPs  | ETPs are being maintained and operated by concerned industry.  |  |  |  |  |  |  |
| operation and maintenance of existing CETPs   | N.A.   |  |  |  |  |  |  |
| · •   | Compliance status w.r.to the industries located in the catchment area of river Ghaggar and its tributaries within the jurisdiction of the respective SPCB/PCC) |  |  |  |  |  |  |
| •   | r<br>f<br>d  |  |  |  |  |  |  |
| (a) List of industries not having valid consents under Water (Prevention and Control of Pollution) Act, 1974 and authorisation under the HW & OW ( M & TM) Rules, 2016 as amended   | Nil  |  |  |  |  |  |  |
| valid consents under Water (Prevention and Control of Pollution) Act, 1974 and authorisation under the HW & OW ( M & TM) Rules, 2016 as amended  (b) List of Industries complying   |  |  |  |  |  |  |  |
| valid consents under Water (Prevention and Control of Pollution) Act, 1974 and authorisation under the HW & OW ( M & TM) Rules, 2016 as amended  (b) List of Industries complying and non-complying to the effluent discharge norms prescribed by | Month No. of Remarks inspections   |  |  |  |  |  |  |
| valid consents under Water (Prevention and Control of Pollution) Act, 1974 and authorisation under the HW & OW ( M & TM) Rules, 2016 as amended  (b) List of Industries complying and non-complying to the effluent                               | Month No. of Remarks   |  |  |  |  |  |  |

|   | Committee or collected from which are give Total inspecte Complying: 2 | n 08.01.2019,<br>various indu<br>en below:-<br>ed unit : 26<br>22<br>g : 4 (Show 0 | releasing waste water without treatment. Unit is sealed and case for filing prosecution has already been handed over to counsel. All units are complying.  All units are stries, status of  Cause Notice is ottling Plant) |
|---|--|--|--|
|   | List enclosed  |  | e-VIII   |
| (c) List of industries indulged in illegal disposal of industrial effluent;                   |  | Nil  |  |
| (d) Industrial hazardous waste (generated from industries, captive ETPs and CETPs) management | units is recyclers/reproof other states.                               | dispose<br>ocessor/TSDI<br>Details of w  | •  |

10. Proposed action plans (short term, medium and long term plans) with time lines including the organisation/agency responsible for its implementation- action plan should cover aspects as detailed below:-

#### **Action Plan for control of Domestic Sewage**

As per information received from Engineering Department, Chandigarh Administration, Municipal Corporation, Chandigarh and Chandigarh Smart City Limited, action plan has been prepared regarding stoppage of discharge waste water into Sukhna Choe & N-Choe, upgradation of existing STPs and installation of new STPs. Details of which are given as under.

## Action Plan for control of discharge of waste water into Sukhna Choe

| Sr.<br>No. | Point  | Status as on<br>December<br>2018                                 | Long<br>Term/Short<br>Term<br>Action Plan  | Financial<br>Implications | Implemen-<br>ting Agency         |
|------------|--|--|--|---------------------------|----------------------------------|
| 1          | Kishangarh Outlet  | There is sewage water discharge from the outlet.                 | STP has been<br>proposed to<br>treat the<br>waste water<br>(Will be<br>commissioned<br>by Nov. 2021)   | -                         | Chandigarh<br>Smart City<br>Ltd. |
| 2          | Outlet of Village<br>Kishangarh inside<br>Forest Nursery             | There is sewage water discharge from the outlet.                 | Engineering Department, Chandigarh Administration will tap the same by 31.03.2019.   | Rs. 19.94<br>Lakhs        | Engg. Deptt.,<br>Chd. Admn.      |
| 3          | Outlet of Village<br>Hallomajra                                      | Around 70 % household have already been connected to sewer line. | By<br>31.01.2019 all<br>the household<br>will be<br>connected to<br>sewer line.<br>After that<br>there will no<br>discharge of<br>waste water.   | -                         | MC, Chd.                         |
| 4          | Second outlet of<br>Bapu Dham<br>Colony (Known as<br>Madrasi Colony) | developers   | Municipal Corporation Chandigarh has stopped all such discharges points and there is no waste water discharge.  (For long term CBD will be replaced by RCC pipe and will be completed by 31.12.2019) | Rs. 22.00<br>Lakhs        | MC, Chd.                         |

|  | Choe may be plugged. |  |  |
|--|----------------------|--|--|
|  |                      |  |  |

## Action Plan for control of discharge of waste water into N-Choe

| Sr.<br>No. | Point                          | Status as<br>on<br>December<br>2018           | Long<br>Term/Short<br>Term<br>Action Plan   | Financial<br>Implications | Implemen-<br>ting<br>Agency |
|------------|--------------------------------|---|---|---------------------------|-----------------------------|
| 1          | Leisure valley                 | 01 outlets is<br>discharging<br>waste water   | One Outlet has been plugged and there is little discharge from one outlet, will be plugged by 31.12.2018. | Rs. 5.00<br>Lakhs         | MC,Chd.                     |
| 2          | 01 outlet in<br>Beant Memorial | Water<br>logging                              | This is major<br>work and will be<br>completed by<br>August, 2019.  | Rs. 182.00<br>Lakhs       | MC,Chd.                     |
| 3          | Sector 52<br>(starting)        | Two outlets<br>discharging<br>Sewage<br>Water | The work will be taken care when the work of Sr. No. 2 will be completed (Will be plugged by 31.12.2019). | -                         | MC,Chd.                     |
| 4          | Sector 52 (End)                | Two outlets<br>discharging<br>Sewage<br>Water | One outlet has<br>been plugged<br>and another<br>outlet will be<br>plugged by<br>31.12.2019.              | -                         | MC,Chd.                     |

### **Sewage Treatment Plant**

Chandigarh Smart City Limited is in process for **upgradation** of below 05 STPs to treat the waste water upto the level of 5 mg/l BOD and also in the process for setting up of new STPs as per detail given below.

| Sr. | Location of | Capacity | Action Plan | Implementing |
|-----|-------------|----------|-------------|--------------|
| No. | STP         |          |             | Agency       |

| 1. | Diggian         | 30 MGD<br>(136.2 MLD)  | Will be upgraded to treat the waste water upto the level of 5 mg/l BOD by Nov. 2021                         | Chandigarh Smart<br>City Limited |
|----|-----------------|------------------------|---|----------------------------------|
| 2. | 3 BRD           | 11 MGD<br>(49.94 MLD)  | Will be upgraded to treat the waste water upto the level of 5 mg/l BOD by Nov. 2021                         | Chandigarh Smart<br>City Limited |
| 3. | Raipur<br>Kalan | 5 MGD<br>(22.7 MLD)    | Will be upgraded to treat the waste water upto the level of 5 mg/l BOD by Nov. 2021                         | Chandigarh Smart<br>City Limited |
| 4. | Raipur<br>Khurd | 1.25 MGD<br>(5.67 MLD) | Will be upgraded to 2.0 MGD Capacity and to treat the waste water upto the level of 5 mg/l BOD by Nov. 2021 | Chandigarh Smart<br>City Limited |
| 5. | Dhanas          | 1.6 MGD<br>(7.26 MLD)  | Will be upgraded to treat the waste water upto the level of 5 mg/l BOD by Nov. 2021                         | Chandigarh Smart<br>City Limited |

Further, the following Sewage Treatment Plants are under construction:-

| Sr. | Location of  | Capacity    | Timelines           | Implementing    |
|-----|--------------|-------------|---------------------|-----------------|
| No. | STPs         |             |                     | Agency          |
| 1.  | Maloya       | 5 MGD       | Will be operational | Municipal       |
|     |              | (22.70 MLD) | by 31.01.2019       | Corporation,    |
|     |              |             |                     | Chandigarh      |
| 2   | Raipur Kalan | 1.25 MGD    | Will be operational | Engineering     |
|     |              | (5.67 MLD)  | by 30.06.2019.      | Department,     |
|     |              |             |                     | Chandigarh      |
|     |              |             |                     | Administration. |

One new Sewage Treatment Plant is also **proposed** to be constructed in Kishangarh Near Sukhna Lake, detail of which is given below:-

| Sr.<br>No. | Location of STPs               | Capacity | Timelines | Implementing Agency              |
|------------|--------------------------------|----------|-----------|----------------------------------|
| 1          | Kishangarh near<br>Sukhna Lake | 2.0 MLD  | •         | Chandigarh Smart<br>City Limited |

| (I) Domestic Sewage Management |        |           |     |      |            |     |      |        |       |
|--------------------------------|--------|-----------|-----|------|------------|-----|------|--------|-------|
| including                      | source | reduction | and | Bulk | generators | and | even | houses | where |

| control measures by bulk sewage generators   | tertiary water supply is available are asked to use as much as possible tertiary water which will reduce the fresh water consumption.   |
|--|---|
| measures for conveyance of<br>sewage through dedicated sewer<br>lines connectivity to STPs   | Whole of Chandigarh connected with Sewerage System and dedicated sewerage lines are there to carry the waste water directly to the sewage treatment plant.  |
| measurement of flows of drains connected to the river/tributaries under reference  | Despite of request to MCC and Engg. Deptt. Chd. Admn, no department has measured the flows of drains.   |
| on-site or in-site treatment measures  | Waste water from whole of the Chandigarh goes to Terminal Sewage Treatment Plants. Now, as per order of Hon'ble NGT residential societies having more than 10,000 sq. meters built up area have to install on site STP which is being enforced.                           |
| end use of treated sewage for<br>beneficial use complying to the<br>prescribed standards   | Treated water is being supplied to various gardens and institutions for gardening purpose. Further, network is being laid to supply the treated water in all areas after which around 20 MGD tertiary waste water will be supplied. This will be completed by March 2020. |
| preparation and execution of the project proposals for sewage management through state-of-the-art STP                                  | Chandigarh Smart City Limited is going to upgrade all the existing STPs to treat the waste water upto the level of 5 mg/l BOD.  |
| strict vigilance effective enforcement of standards prescribed under the Environment (Protection) Act, 1986                            | CPCC is monitoring performance of STPs on monthly basis and results are shared with concerned agencies to take corrective measures.   |
| actions initiated against violators, sewage management in rural areas with low cost treatment technologies like constructed wet lands) | N.A.  |

# measures which include source control like adoption of state-of-the-art technologies Presently there is no CETP in Chandigarh being a very small city and very less generation of waste water. There are around 100 electroplating units all of which have captive ETPs. Because of cost of land no CETP is feasible in U.T. Chandigarh. Now, there is one firm which is in process for

|  | setting up of CETP in Punjab and ready to accept the waste of electroplating units of Chandigarh.  |
|--|--|
| reuse of treated industrial effluent to reduce fresh water consumption   | Treated industrial effluent goes to Sewage Terminal Treatment Plant and again treated there from where tertiary treated waste water is supplied to various gardens and institute.  |
| adoption of zero liquid discharge  | Possibility in this regard will be looked out.   |
| sludge management  | Sludge from ETPs of Industrial units which is not hazardous is being disposed with municipal waste and sludge which is hazardous in nature in being disposed through TSDF Nimbua.  |
| recovery and reuse of recovered chemicals in the process   | N.A.   |
| measures for conveyance of industrial effluent through dedicated lines and its connectivity to ETPs/CETPs            | There is no CETP in Chandigarh.  |
| preparation and execution of the project proposals for industrial effluent management (ETPs/CETPs)                   | Presently there is no CETP in Chandigarh being a very small city and very less generation of waste water. There are around 100 electroplating units all of which have captive ETPs. Because of cost of land no CETP is feasible in U.T. Chandigarh. Now, there is one firm which is in process for setting up of CETP in Punjab and ready to accept the waste of electroplating units of Chandigarh. |
| Strict vigilance   | All efforts are being done to monitor  |
| Effective Enforcement of standards prescribed under the Environment (Protection) Act, 1986, action against violators | industries and applicable actions as and when required are being taken.  |

| (III) Ground water management                                |   |
|--|---|
| obtaining of NOC from CGWB for use of ground water resources | On enquiring, it has been informed that in case of Chandigarh CGWB is not giving NOC it is being done by Municipal Corporation, Chandigarh. |
| ground water survey for quality assessment                   | Ground water data has already been given in Table 2.  |
| identification of problem sources                            | Till date as per the available data there is no such problem in ground water of U.T. Chandigarh.  |

| sealing of contaminated hand<br>pumps/tube wells used by the<br>general public for drinking water<br>purposes                              | Municipal Corporation, Chandigarh has already banned use of hand pump for drinking purpose. Tube wells are used for supply only by MC, Chd. |
|--|---|
| supply of ground water to the public living in areas where ground water is contaminated  | N.A.  |
| measures to control depletion of<br>groundwater table as well as for<br>increasing ground water levels<br>(ground water recharge measures) | ·   |
| remedial measuresfor decontamination of highly polluted groundwater resources within the jurisdiction of the respective State/UT           | There is no polluted ground water source in U.T. Chandigarh.  |

#### (IV) Restoration of river Ghaggar and Its tributaries water quality

All the efforts are being done to ensure that no sewer/waste water will be allowed to discharge into Sukhna choe and no industrial waste water goes to river ghaggar so in future (after implementation of action plan) there will not be any pollution load in river Ghaggar.

#### (V) Maintaining of E-Flows for having ecological balance in the river system

River Ghaggar is passing around 7.0 K.M. far from Chandigarh hence maintaining of E-flow is not applicable in case of U.T. Chandigarh.

#### (VI) Awareness on:

| Effective use of groundwater        | N.A.                                |
|-------------------------------------|-------------------------------------|
| resources for agriculture purpose   |                                     |
| Health status and organising health | Health camps was organised by       |
| camps                               | Health Department on 11.11.2018. In |
|                                     | future more health camps will be    |
|                                     | organised to aware general public   |
|                                     | regarding ill effect of improper    |
|                                     | disposal of waste water. (Annexure- |
|                                     | IX)                                 |

## (vii) Monitoring of executing the actions plans:

Execution of Action Plan will be monitored by Chandigarh Pollution Control Committee.

#### CHANDIGARH ADMINISTRATION DEPARTMENT OF ENVIRONMENT

A District Level Special Task Force and State Level Special Task Force consisting of the following members are hereby constituted as per the direction of Hon'ble National Green Tribunal, New Delhi in the matter O.A. No. 138 of 2016 and O.A. No. 139 of 2016 titled "Stench Grips Mansa's Sacred Ghaggar River".

#### District Level Special Task Force:-

| 1. | District Magistrate, U.T., Chandigarh       | W112 |   | Chairman |
|----|---|------|---|----------|
| 2. | Superintendent of Police, Chandigarh Police |      |   | Member   |
| 3. | One person to be nominated by the           |      | * | Member   |

District Judge in his capacity of

Head of the District Legal Services Authority. 4. Superintending Engineer, Public Health Division, Member

Engineering Department, Chandigarh Administration. Superintending Engineer, Public Health Division, Member

Municipal Corporation, Chandigarh. Member Secretary Scientist 'B', Chandigarh Pollution Control Committee

State Level Special Task Force:-

Chairman 1. Advisor to the Administrator, U.T., Chandigarh 2. Secretary Environment, Chandigarh Administration Member Secretary, Urban Planning, U.T., Chandigarh
 Secretary, Local Body, U.T., Chandigarh. Member Member 5. Commissioner, Municipal Corporation, Chandigarh Member Chief Engineer, Engineering Department, Member

Chandigarh Administration

7. Member Secretary, Chandigarh Pollution Control Committee -Member Secretary

The District Level Special Task Force so constituted shall identify the persons responsible for violation of law in the said matter. The District Level Task Force will submit a monthly action taken report to the State Level Special Task Force and State Level Special Task Force will furnish 3 monthly report or the action taken report to the Central Pollution Control Board.

This is issued with the approval of Competent Authority.

Dated Chandigarh the September 7th, 2018

DEBENDRADALAI, IFS Special Secretary Environment Chandigarh Administration

Endst.No.ED/2018//3/0 - 1322

Chandigarh, dated the 7/9/18

A copy is forwarded to the following for information and necessary action:-

1. Advisor to the Administrator, U.T., Chandigarh.

Secretary Environment, Chandigarh Administration.

Secretary, Urban Development, U.T., Chandigarh.

4. Secretary, Local Body, U.T., Chandigarh.

Commissioner, Municipal Corporation, Chandigarh.

Chief Engineer, Engineering Department, Chandigarh Administration.

Member Secretary, Chandigarh Pollution Control Committee.

8. District Magistrate, U.T., Chandigarh.

Superintendent of Police, Chandigarh Police.

10. One person to be nominated by the District Judge in his capacity of Head of the District Legal Services Authority.

11. Superintending Engineer, Public Health Division, Engineering Department, Chandigarh Administration.

12. Superintending Engineer, Public Health Division, Municipal Corporation, Chandigarh.

13. Scientist 'B', Chandigarh Pollution Control Committee.

DEBENDRA BALAI, IFS Special Secretary Environment Chandigarh Administration

Endst.No.ED/2018//32-3

Chandigarh, dated the 7/9/18 A copy is forwarded to the Secretary to the Administrator, U.T. Chandigarh for the

kind information of the H.E. the Administrator, U.T., Chandigarh.



Minutes of the meeting held on 12th September, 2018 regarding preparation of Action Plan w.r.t. Up-gradation of existing Sewage Treatment Plants & Tapping of untreated waste water into Choes/Drainage.

A meeting to discuss the matter regarding preparation of Action Plan w.r.t. Upgradation of existing Sewage Treatment Plants & Tapping of untreated waste water into Choes/Drainage is held in the O/o Member Secretary, Chandigarh Pollution Control Committee. The following members were present:-

- Sh. T.C. Nautiyal, IFS, Member Secretary, Chandigarh Pollution Control Committee.
- Sh. Vivek Pandey, Scientist 'B', Chandigarh Pollution Control Committee. 2.
- Sh Harish Kumar Saini, Executive Engineer, Municipal Corporation, Chandigarh. 3.
- Sh. Amit Sharma, Sub Divisional Engineer, Municipal Corporation, Chandigarh. 4.
- Sh. Kamal Kishore, Executive Engineer, Chandigarh Administration. 5.
- Sh. Rajinder Singh, Superintending Engineer, Chandigarh Administration.

The following points have been discussed in the meeting:-

- Stoppage of sewer discharge point in N-Choe.
- Stoppage of untreated waste water discharge near Sector 48 (3BRD). 2)
- Stoppage of waste water discharge points in Sukhna Choe specifically about 3) colony no. 4 & Hallomajra.
- Stoppage of going of industrial waste water into Sukhna Choe (pump house 4) behind poultry farm)
- Stoppage of waste water behind Gaushala, Industrial Area, Phase-I, Chandigarh. 5)
- Stoppage of waste water inside the forest area, Phase-I. 6)
- Upgradation of existing STPs 7)
- Construction of new STPs 8)
- Quantification of complete waste water discharge (Total Load).

During discussion, it has been decided that a joint field visit will be carried out on 18.09.2018 at 11:00 AM onwards alongwith the officers of Engineering Department, Chandigarh Administration and Municipal Corporation, Chandigarh for indentification of all the discharge points of untreated waste water into drains. Thereafter, Engineering Department, Chandigarh Administration and Municipal Corporation, Chandigarh will submit the action plan by 21.09.2018.

Rajinder Singh, Superintending Engineer, Engg. Deptt. Chd. Admn.

Kaiff W RYShore, Executive Engineer, Engg. Deptt. Chd. Admn.

Harish Kumar Saini, Executive Engineer, MCC

Amit Sharma, Sub Div. Engineer,

MCC

T.C. Nautiyal, IFS Member Secretary, CPCC Scientist 'B', CPCC



## MINUTES OF THE JOINT INSPECTION HELD ON 18<sup>TH</sup> SEPTEMBER, 2018 TO CHECK THE DISCHARGE OF UNTREATED WASTE WATER IN SUKHNA CHOE.

A joint inspection was carried out by the following Officers of Engineering Department, Chandigarh Administration, Municipal Corporation, Chandigarh and Chandigarh Pollution Control Committee to check the various points where sewage water is discharged without treatment into Sukhna Choe:-

- Sh. T.C. Nautiyal, IFS, Member Secretary, Chandigarh Pollution Control Committee.
- 2. Sh. Vivek Pandey, Scientist 'B', Chandigarh Pollution Control Committee.
- 3. Sh. Kamal Kishore, Executive Engineer, Chandigarh Administration.
- 4. Sh. Prabhjot Singh, Sub. Divisional Officer, Municipal Corporation, Chandigarh.
- Sh. Sukhraj Singh, Sub. Divisional Engineer, Engineering Department, Chandigarh Administration.
- 6. Sh. Bhupinder Singh, Junior. Engineer, Municipal Corporation, Chandigarh.

The observations are given as under:-

| Sr. No. | Point   | Status  |
|---------|---|---|
| 1       | Kishangarh Outlet   | There is sewage water discharge from the outlet.  |
| 2       | Outlet of Village Kishangarh inside Forest Nursery  | There is sewage water discharge from the outlet.  |
| 3       | Outlet of Shastri Nagar   | There is sewage water discharge of sewage water.  |
| 4       | First outlet of Bapu Dham near<br>bridge on the road connecting IT<br>park with Sector 26, Chandigarh | There is sewage water discharge at<br>first outlet of Bapu Dham near bridge<br>on the road connecting IT Park |
| 5       | Second outlet of Bapu Dham<br>Colony (Known as Madrasi Colony)  | There is sewage water discharge at second outlet of Bapu Dham colony  |
| 6       | Outlet from back of Gaushala,<br>Industrial Area, Phase-I, Chd.                                       | There is substantial sewage discharge from back of Gaushala, Industrial Area, Phase-I, Chd.                   |
| 7       | Outlet near CTU workshop<br>Industrial Area, Phase-I, Chd.<br>(Inside Forest Area)                    | There is sewage discharge at the outlet near CTU workshop.  |



| 8  | Indl. Area, Phase - I, Colony No. 4.   | There is discharge from many outlets from Indl. Area, Phase - I, Colony No. 4.               |
|----|--|--|
| 9  | Pump House operated by Municipal Corporation behind Central Poultry Development Organization, Indl. Area, Phase - I, Chandigarh. | In case of Non-operation of pump, waste water directly goes to Sukhna Choe on regular basis. |
| 10 | Outlet of Village Hallomajra   | There is substantial sewage discharge from the outlet of Village Hallomajra.                 |

Other than above, there was one point at Makhan Majra, where waste water leakage is there which is assured by Engineering Department, Chandigarh Administration that they will repair the same with immediate effect.

Thereafter, Engineering Department, Chandigarh Administration and Municipal Corporation, Chandigarh have assured that they will submit the action plan by 21.09.2018 (Friday) on the following points:-

1. Stoppage of Sewage waste water from above points.

2. Up-gradation of existing Sewage Treatment Plants.

Tapping of untreated waste water into Choes/Drainage.

Prabhjot Singh, Sub. Div. Officer, MCC Sukhraj Singh, Sub. Div. Engineer, Engg. Deptt., Chd. Admn. Bhupinder Singh, Jr. Engineer, MCC

Vivek Pandey, Scientist 'B', CPCC Kamai Kishore, Executive Engineer, Engg. Deptt.

Chd. Admn

T.C. Nautiyal, IFS Member Secretary, CPCC MINUTES OF MEETING OF DISTRICT LEVEL TASK FORCE HELD ON 01.10.2018
AT 11:00 A.M. UNDER THE CHAIRMANSHIP OF DISTRICT MAGISTRATE, U.T.
CHANDIGARH IN COMPLIANCE OF HON'BLE NGT ORDER DATED 07.08.2018 IN
THE MATTER OF OA NO.138 OF 2016 (TNHRC) (CASE NO. 559/19/11/14) AND OA
NO. 139 OF 2016 (TNHRC) TITLED STENCH GRIPS MANSA'S SACRED GHAGGAR
RIVER (SUO-MOTU CASE) AND YOGENDER KUMAR.

The following officers were present in the meeting: -

| Sr.<br>No. | Name of Officer & Designation       | Deptt's. Name                             | Mobile No.          |
|------------|-------------------------------------|---|---------------------|
| 1.         | Sh. Amarinder Sharma,<br>Secretary, | District Legal Services<br>Authority,     | 7569730007 (Keynul) |
| 2.         | Sh. Vivek Pandey, Scientist 'B'     | Chandigarh Pollution<br>Control Committee | 9888116680 V:-      |
| 3          | Sh. Suresh Kumar, XEN               | PH-2, M.C.                                | May 2               |
| 4.         | Ms. Sarita Roy, SI                  | I/C Neelam Police Post                    | 9779580932          |
| 5.         | Sh. Sukhraj Singh, SDE              | PH Divn., Engg. Deptt.,<br>Chd.           | 7508185457          |

At the outset, Sh. Vivek Pandey, Scientist 'B', CPCC apprised about the directions of the Hon'ble National Green Tribunal, New Delhi regarding the discharge of waste water – industrial as well as municipal into River Ghaggar. The District Level Special Task Force will identify the defaulters for discharging the waste water into the drains which ultimately reaches to Ghaggar river. Under the statutory scheme, the Pollution Control Boards are required to prosecute all those who are responsible for discharging the effluents beyond standards and also to close all such commercials/industrial establishments. The District Level Special Task Force will submit monthly report to the State Level Special Task Force. Then, the State Level Task Force will submit a 3 monthly report or recommendation to the Executing Committee.

The following points were discussed in the meeting: -

- Stoppage of Sewer discharge points in N-Choe.
- Stoppage of waste water discharge points in Sukhna Choe specifically about colony No.4 & Hallomajra.
- 3 Stoppage of going of industrial waste water into Sukhna Choe (pump house behind poultry farm).
- Upgradation of existing STPs/setting up of new STPs.
- 5. Maintenance of Log Book.
- Formation of Action Plan.
- Identification of the defaulters by M.C.

#### The following decisions were taken in the meeting:

 Municipal Corporation, Chandigarh and Engineering Department, Chandigarh Administration will upgrade the existing STPs/set up new STPs in their respective jurisdiction to meet with the standards directed by CPCB/CPCC



and action plan in this regard alongwith timeline will be submitted within 15 days. The CPCB will further ensure the purity of water up to 5 BOD.

- The officers of Chandigarh Pollution Control Committee (CPCC), Engineering 2. Department Chd. Admn. and Municipal Corporation, Chd. have identified the 10 points where sewerage water is discharged without treatment into Sukhna Choe. Municipal Corporation, Chandigarh and Engineering Department, Chandigarh Administration will take measures to tap these points to ensure that no untreated waste water release into Sukhna Choe. Status report in this regard will be submitted by the M.C. within 15 days.
- Prior intimation shall be given by the CPCC to the Police Deptt. for providing 3. police protection to the officers for carrying out inspection and deputing the beat cops with the team.
- Municipal Corporation, Chandigarh will provide the list of industrial plots who 4. have not taken sewer connection.
- Municipal Corporation, Chandigarh and Engineering Department, Chandigarh 5. Administration will make standby arrangement of pumps alongwith the existing pumps at sewage pumping stations and Log Book shall be maintained at each pumping station.
- Points where waste water is being discharged into N-Choe to be identified in 6. the coming time in scheduled manner. M.C. and CPCE will submit plan of action in 15 days.
- CPCC will provide the quality of drains at entry/exit points of Chandigarh 7.
- MC. Chd. will provide the details of discharge points at Patiala ki rao and 8. provide the action plan for stoppage of the same.
- MC, Chd, will identify the people who have laid down illegal pipelines and 9. discharging waste water into storm water drainage system/drains and Public Notice shall be given by the CPCC in this regard. Police will follow this.

10. The next meeting will be held on 10.10.2018.

Amarinder Sharma, Secretary

O/o District Legal Services Authority

(Member)

Suresh Kumar, XEN

O/o P.H. Divn. No.2, M.C.

(Member)

Sukhraj Singh, SDE

O/o PH Divn. Enga. Deptt

a, IAS Sachin

Magistrate, Chd

I/C Neelam Police Post

O/o Superintendent of Police,

Vivek Pandey, Scientist 'B' O/o Chd. Pollution Control Board

(Member)

(Member)

Sarita Roy, St

Annexure-V

MINUTES OF 2<sup>nd</sup> MEETING OF DISTRICT LEVEL TASK FORCE HELD ON 11.10.2018 AT 09:30 A.M. UNDER THE CHAIRMANSHIP OF SHRI SACHIN RANA, IAS, DISTRICT MAGISTRATE, U.T. CHANDIGARH IN COMPLIANCE OF HON'BLE NGT ORDER DATED 07.08.2018 IN THE MATTER OF OA NO.138 OF 2016 (TNHRC) (CASE NO. 559/19/11/14) AND OA NO. 139 OF 2016 (TNHRC) TITLED STENCH GRIPS MANSA'S SACRED GHAGGAR RIVER (SUO-MOTU CASE) AND YOGENDER KUMAR.

The following officers were present in the meeting: -

| Name of Officer &                          | Deptt's, Name                   | Mobile No.                      |
|--|---------------------------------|---------------------------------|
| Sh. Vivek Pandey, Scientist                | Chandigarh Pollution            | 9888116680                      |
| B' Sh. Suresh Kumar Gill, XEN              | Control Committee<br>PH-2, M.C. | 9872511258 Jan 1                |
| Insp. Pavnesh Kumar Sh. Sukhraj Singh, SDE |                                 | 9779580998 A 7700<br>7508185457 |
| Sh. Sukhraj Singh, SDE                     | Deptt., Chd.                    | 750010500                       |

Initially, Sh. Vivek Pandey, Scientist 'B', CPCC submitted the lest reports of water quality of all the three drains at Entry and Exit points of Chandigarh and also submitted the list showing waste water discharge points at N-Choe. He also informed that public notice w.r.t. prohibition of discharge of waste water into drains, as decided in Ist meeting, has been published in various newspapers. He further apprised that BOD/TSS levels are very high at all the exit points which should be less than 30 mg/l for BOD and 100 mg/l for TSS as per existing norms. He has also submitted that there is no provision for treatment of coliform in the existing STPs except in Diggian which is also not sufficient. He, thereafter informed the Chair that the action plan has not been received from both the deptt. and DO letters have also been sent by the Secretary Environment.

Further, Sh. Suresh Kumar, XEN, P.H., Divn. No. 2, M.C. apprised that waste water discharge in N-Choe has been stopped upto sector 23 and action plan for stopping of remaining points will be submitted by the M.C. immediately in two days of this meeting.



## The following decisions were taken in the meeting:

- The points through which the waste water is being discharged directly into the N-choe should be closed within 15 days by the M.C. with the support of police
- 2 The format for action plan will be given by CPCC to the Municipal Corporation and Engg. Deptt., Chd. Admn. by today and thereafter the action taken report will be submitted by both the departments within three days.
- 3. The next meeting will be held on 22,10,2018 at 04:00 p.m.

Vivek Pandey, Scientist 'B' O/o Chd. Pollution Control Board

(Member)

Pavnesh Kumar, Insp. 1814

O/o Superintendent of Police,

(Member)

Sachin Rana, IAS
District Magistrate, Chd.

(Chairman)

Suresh Kumar, XEN

O/o P.H. Divn. No.2, M.C.

(Member)

Sukhraj Singh, SDE

O/o P.H. Divn. Engg. Deptt.

(Member)

Annyure-VI

MINUTES OF 3<sup>rd</sup> MEETING HELD ON 07.12.2018 AT 03:00 P.M. UNDER THE CHAIRMANSHIP OF DEPUTY COMMISSIONER, U.T. CHANDIGARH IN CONNECTION WITH THE DIRECTIONS DATED 07.08.2018 ISSUED BY THE HON'BLE NGT IN THE MATTER O.A. No. 138 of 2016 AND O.A. No. 139 of 2016 TITLED – "STRENCH GRIPS MANSA'S SACRED GHAGGAR RIVER AND YOGENDER KUMAR".

The following officers were present in the meeting: -

| Sr.<br>No. | Name of Officer & Designation                             | Deptt's. Name                             | Mobile No. |
|------------|---|---|------------|
| 1,         | Sh. Amarinder Sharma, Secretary,                          | District Legal Services<br>Authority,     | 7569730007 |
| 2.         | Er. Sh. Sanjay Arora, SE                                  | S.E. (PH) MCC                             | 995711456  |
| 2.         | Sh. Vivek Pandey, Scientist 'B'                           | Chandigarh Pollution Control<br>Committee | 9888116680 |
| 3.         | Sh. Suresh Gill, XEN                                      | M.C., P.H2                                | 9872511258 |
| 4.         | Sh. 1.D. Sharma, XEN                                      | P.H., M.C.                                | 9872511231 |
| 5.         | Ms. Shobhna Pathania, Nodal<br>Officer, Health Department | GMSH-16, Chd.                             | 9041046076 |
| 6.         | Sh. Kamal Kishore, XEN                                    | P.H3, Chd.                                | 9915222400 |
| 7,         | Sh. Vijay Kumar, XEN                                      | M.C. P.H.                                 | 9872511245 |
| 8.         | Sh.Sukhraj Singh, SDE                                     | O/o EE PH-3                               | 7508185457 |
| 9.         | Sh. Rajbir Singh, SDE                                     | P.H., MC                                  | 9872511352 |
| 10.        | Sh. Harish Saini, XEN                                     | PH-1, M.C.                                | 9872511254 |
| 11.        | Dr. Amrit, MOH  | M.C.                                      | 9888348852 |
| 12.        | Sh. Jaspal Singh, SHO, PS-17                              | Police Deptt.                             | 9779580917 |
| 13.        | Sh. N.P. Sharma, General Manager                          | Chandigarh Smart City Ltd.                | 9781010000 |
| 14.        | Sh. Surinder Kumar, SDO (Bldg.)                           | Estate Office                             | 9216465070 |

At the outset, Sh. Vivek Pandey, Scientist 'B', CPCC apprised about the directions of the Hon'ble National Green Tribunal, New Delhi regarding the discharge of effluents – industrial as well as municipal into River Ghaggar. The District Level Special Task Force will identify the defaulters for discharging the effluents into the Ghaggar river beyond standards. Under the statutory scheme, the Pollution Control Boards are required to prosecute all those who are responsible for discharging the affluents beyond standards and also to close all commercials establishments. The District Level Special Task Force will submit monthly report to the State Level Special Task Force. Then, the State Level Task Force will submit a 3 monthly report or recommendation to the Central Pollution Control Board.

Sh. Vivek Pandey Informed that River Ghaggar is passing around 7 Kms. far from Chandigarh and there are two main sources of discharge from Chandigarh 1) Sukhna Choe 2) N-Choe. In these choes two types of waste water is being discharged

- 1) Treated waste water from the STPs.
- 2) Direct discharge of untreated waste water

Thereafter Municipal Corporation and Engg. Department were asked to provide the information related to action taken on discharge points in Sukhna Choe and N-Choe and action

plan where action is yet to be taken. Details w.r.t, action taken and action plan are as given below

## STATUS OF UNTREATED WASTE WATER DISCHARGE IN SUKHNA CHOE

| Sr.<br>No. | Point   | Status as on<br>September 2018  | Status as on 07.12.2018  | Action Plan  |
|------------|---|---|--|--|
| 1          | Kishangarh<br>Outlet  | There is sewage water discharge from the outlet.  | As a short term measure<br>proposal has been<br>submitted to lift the waste<br>water and connect it with<br>sewerage line  | STP has been<br>proposed to<br>treat the waste<br>water (Will be<br>commissioned<br>by Nov. 2022)  |
| 2          | Outlet of Village<br>Kishangarh inside<br>Forest Nursery  | There is sewage<br>water discharge<br>from the outlet.  | Still sewage is being discharged   | Chandigarh<br>Administration<br>will tap the same<br>by 31.03.2019.  |
| 3          | Outlet of Shastri<br>Nagar  | There is sewage water discharge.  | Sump has already been created  | Sewage water will<br>be pumped to the<br>sewer line.   |
| 4          | First outlet of<br>Bapu Dham near<br>bridge on the<br>road connecting<br>IT park with<br>Sector 26,<br>Chandigarh | There is sewage<br>water discharge<br>at first outlet of<br>Bapu Dham near<br>bridge on the<br>road connecting<br>IT Park | Leakage has been plugged.  |  |
| 5          | Second outlet of<br>Bapu Dham<br>Colony (Known<br>as Madrasi<br>Colony)   | There is sewage<br>water discharge<br>at second outlet<br>of Bapu Dham<br>colony  | The slum developers have constructed their toilets on the existing CBD. Matter has now been taken up with Estate Office, U.T. Chandigarh for removal of encroachment on the CBD at Bapu Dham Colony, so that flow coming into Choe may be plugged. | Municipal Corporation Chandigarh will stop all such discharges within 10 days by providing alternate arrangements for the locals i.e. 18.12.18 |
| 6          | Outlet from back<br>of Gaushala,<br>Industrial Area,<br>Phase-I, Chd.   | There is substantial sewage discharge from back of Gaushala, Industrial Area, Phase-I, Chd.                               |  | Municipal<br>Corporation<br>Chandigarh will<br>plug the discharge<br>within 10 days i.e<br>18.12.18  |
| 7          | Outlet near CTU workshop Industrial Area, Phase-I, Chd, (Inside Forest Area)                                      | discharge at the outlet near CTU workshop.  | water flow. Now there is no  | Regular<br>inspection will be<br>done to ensure<br>that there is no<br>waste water<br>discharge into   |

|    |  |   |   | Sukhna Choc.   |
|----|--|---|---|--|
| 8  | Indl. Area, Phase - I, Colony No. 4.   | There is discharge from many outlets from Indl. Area, Phase I, Colony   | Waste water has already<br>been tapped and diverted to<br>sewer line.   | Regular<br>inspection will be<br>done to ensure<br>that there is no<br>waste water<br>discharge into<br>Sukhna Choe. |
| 9  | Pump House operated by Municipal Corporation behind Central Poultry Development Organization, Indl. Area, Phase - I, Chandigarh. | In case of Non-<br>operation of<br>pump, waste<br>water directly<br>goes to Sukhna<br>Choe on regular<br>basis. | New stand by motor has<br>already been installed and<br>now no waste water is being<br>discharged into Sukhna<br>Choe.                      | Regular<br>inspection will be<br>done to ensure<br>that there is no<br>waste water<br>discharge into<br>Sukhna Choe. |
| 10 | Outlet of Village<br>Hallomajra  | There is substantial sewage discharge from the outlet of Village Hallomajra.                                    | Around 70% of household have been connected to sewer line and for remaining 30% work is under process.                                      | By 31.01.2019 all<br>the household will<br>be connected to<br>sewer line.  |
| 11 | Village Daria  | There is<br>discharge of<br>sewage water<br>from Village<br>Daria   | Excess sewage of unauthorised colony in village Daria has been tapped and put in the sump and the same is being pumped into the sewer line. |  |

## STATUS OF UNTREATED WASTE WATER DISCHARGE IN N- CHOE

| Sr.<br>No. | Point   | Status as on<br>September 2018               | Status as on `07.12.2018  | Action Plan |
|------------|---|--|---|-------------|
| 1          | leisure valley                                    | 02 outlets are<br>discharging waste<br>water | Outlets have<br>been plugged.<br>Now there is no<br>waste water<br>discharge. |             |
| 2          | Near red cross<br>(Madhya Marg)                   | 01 outlet discharging waste water            | Outlet has been plugged. Now there is no waste water discharge.               |             |
| 3          | Sec 23 near B.D<br>Hospital (Neuro<br>Psychiatry) | 01 outlet discharging<br>waste water         | Outlet has been plugged. Now there is no waste water discharge.               |             |

| 4 | Bal Bhawan side                | Very less discharge                        | Outlet has been plugged. Now there is no waste water discharge. |   |
|---|--------------------------------|--|---|---|
| 5 | 01 outlet in Beant<br>Memorial | Water logging                              |   | This is major<br>work and will be<br>completed by<br>August, 2019.                    |
| 6 | sector 52 (starting)           | Two outlets<br>discharging Sewage<br>Water |   | Municipal Corporation Chandigarh will plug the discharge within 10 days i.e. 18.12.18 |
| 7 | sector 52 (End)                | Two outlets<br>discharging Sewage<br>Water |   | Municipal Corporation Chandigarh will plug the discharge within 10 days i.e. 18.12.18 |
| - | One outlet coming from Sec 51  | Sewage Water                               | Already tapped  |   |

# STATUS OF TREATED WASTE WATER FROM STPs DISCHARGE INTO RIVER GHAGGAR

At present five Sewage Treatment Plants are operational in Chandigarh as per detail given below.

| Sr. No. | Location of STP | Capacity Capacity     |
|---------|-----------------|-----------------------|
| 1.      | Diggian         | 30 MGD (1.36,200 KLD) |
| 2.      | 3 BRD           | 11 MGD (49,940 KLD)   |
| 3.      | Raipur Kalan    | 5 MGD (22,700 KLD)    |
| 4.      | Raipur Khurd    | 1.25 MGD (5,675 KLD)  |
| 5.      | Dhanas          | 1.6 MGD (7,264 KLD)   |

Chandigarh Smart City Limited is in process for upgradation of below 05 STPs to treat the waste water upto the level of 5 mg/l BOD and also in the process for setting up of new STPs as per detail given below.

| Sr. No. | Location of STP Diggian | Capacity   30 MGD (1,36,200 KLD) | Action Plan  Will be upgraded to treat the waste water upto the level of 5 mg/l BOD by |
|---------|-------------------------|----------------------------------|--|
| 2.      | 3 BRD                   | 11 MGD (49,940 KLD)              | Nov. 2022  Will be upgraded to treat the waste water upto the                          |

|    |              |                      | level of 5 mg/l BOD by<br>Nov. 2022   |
|----|--------------|----------------------|---|
| 3. | Raipur Kalan | 5 MGD (22,700 KLD)   | Will be upgraded to treat<br>the waste water upto the<br>level of 5 mg/l BOD by<br>Nov. 2022                |
| 4, | Raipur Khurd | 1.25 MGD (5,675 KLD) | Will be upgraded to 2.0 MGD Capacity and to treat the waste water upto the level of 5 mg/l BOD by Nov. 2022 |
| 5. | Dhanas       | 1.6 MGD (7,264 KLD)  | Will be upgraded to treat<br>the waste water upto the<br>level of 5 mg/l BOD by<br>Nov. 2022                |

## 02 Nos, new Sewage Treatment Plants are under construction.

| Sr. No. | Location<br>of STPs | Capacity                 | Remarks  | Timelines   |
|---------|---------------------|--------------------------|--|---|
| 1,      | Maloya              | 5 MGD<br>(22,700<br>KLD) | Constructed by<br>Municipal Corporation,<br>Chandigarh                     | Will be<br>operational<br>by 31 <sup>st</sup><br>January 2019 |
| 2       | Raipur<br>Kalan     | 1.25 MGD<br>(5,675 KLD)  | Constructed by<br>Engineering Department,<br>Chandigarh<br>Administration. | Not provided  |

Further, 01 No. new Sewage Treatment Plant is proposed.

| The second | To a compa                     | Capacity               | Remarks          | Timelines |
|------------|--------------------------------|------------------------|------------------|-----------|
| Sr. No.    | Location of STPs               |                        | As informed by   | Will be   |
|            | Kishangarh near<br>Sukhna Lake | 2.0 MLD<br>(2,000 KLD) | Chandigarh Smart |           |

However it was informed by Sh. Vivek Pandey that some of the STPs are not meeting with the prescribed norms (Designed criteria). Chairman told the Municipal Corporation and Engg. Deptt., Chd. Admn. to look into the matter immediately and to ensure that all the waste water treated from STPs should meet with prescribed norms otherwise responsibility will be fixed and suitable action would be taken. Following decisions were also taken during meeting:

- 1. Action Plan as prepared above should be complied by all the respective deptt.
- One Seminar will be conducted by Municipal Corporation Chandigarh in association with Health department and CPCC to aware/sensitize the public regarding ill effects and penal provisions w.r.t. illegal discharge of waste water into drains/Choes.
- During next sampling CPCC will inform MCC and Engg. Deptt., Chd. Admn. So that they can also take samples simultaneously if they want.
- SDO (Bldg.) will provide the list of industrial plots, by 17.12.18, who have not taken sewerage connection till date.

- 5. Health Deptt, will conduct health camp in the month of December also.
- Municipal Corporation will provide the information related to ground water extraction as required by CPCC by 17.12.18.

The meeting ended with a vote of thanks to the Chair.

Monthly Status Report for October w.r.t. O.A. No. 138 of 2016 and O.A. No. 139 of 2016 titled Stench Grips Mansa's Sacred Ghaggar River (Suo-Motu case)

It is submitted that Hon'ble National Green Tribunal, Principal Bench, New Delhi has passed an order dated 7th August, 2018 (flag 'A') vide which it is informed that proceedings in the matter O.A. No. 138 of 2016 and O.A. No. 139 of 2016 titled Stench Grips Mansa's Sacred Ghaggar River (Suo-Motu case) were initiated before the Tribunal on a reference received from the National Human Right Commission (NHRC). The NHRC took Suo-Motu action on the basis of a news item appearing in The Tribune, dated 12.05.2014 under the caption "Stench Grips Mansa's Sacred Ghaggar River" to the effect that the river Ghaggar had turned into a polluted water body on account of discharge of effluents – industrial as well as municipal.

In pursuant to the order of Tribunal dated 09.12.2016, a joint inspection has been carried out by the representatives of the Central Pollution Control Board, Punjab State Pollution Control Board, Haryana Pollution Control Board, Himachal Pradesh State Pollution Control Board. Officials of Union Territory, Chandigarh also joined the said inspection team. Further, as per report, submitted by the concerned Pollution Control Boards to the NHRC as well as Minutes of the meetings on various dates in which the respective States participated. The joint analysis report of the joint monitoring of river Ghaggar samples has also been filed. The findings of the joint inspection report are that values of various parameters such as BOD, TSS, Faecal Coliform, Lead and Iron were beyond permissible limits at most of the locations in Himachal Pradesh, Haryana, Punjab and Chandigarh.

The Chief Secretaries of the States of Himachal Pradesh, Haryana, Punjab and also the Administrator of U.T., Chandigarh have been directed to constitute Special Task Force (STFs) comprising of District Magistrate, Superintendent of Police, Regional Officer of the State Pollution Control Board in concerned District and one person to be nominated by the District Judge in every District in his capacity of Head of the District Legal Services Authority. Such STF may identify persons responsible for violation of law so that action can be taken. At the State Level, the STF will comprise of the Chief Secretary, Secretary Environment, Secretary of Urban Development and Secretary of Local Body. The District Level Special Task Force will submit a monthly action taken report to the State Level Task Force and State Level Special Task Force will furnish 3 monthly report or the action taken to the Central Pollution Control Board

An Executive Committee was also constituted by Hon'ble NGT (as per para 8 of the order) under the Chairmanship of Justice Pritam Pal, Former Judge, Punjab and Haryana High Court. A preliminary meeting of the representatives of all the State/UT was held on 31.08.2018, in which, the issue of constitution of Special Task Force (STF) in compliance of the above referred order of the Hon'ble NGT was also discussed (para 6 of the order).



|   |  | (placed at Annexure-III)   |  |  |
|---|--|--|--|--|
| 6 | CPCC will provide the quality of drains at entry/exit points.  | A Company of the Comp |  |  |
| 7 | MC, Chd. will provide the details of discharge points at Patiala kiRao and provide the action plan for stoppage of the same.   | Not provided by Municipal<br>Corporation, Chandigarh   |  |  |
| 8 | MC, Chd. will identify the people who have laid down illegal pipelines and discharging waste water into storm water drainage system/drains and Public Notice shall be given by the CPCC in this regard | Corporation, Chandigarh  |  |  |

The second meeting of District Level Special Task Force was held on 11.10.2018. The detail of decisions taken in the said meeting and action taken on the decisions are given as under:-

| Sr.<br>No. | Decision taken in the meeting   | Action taken report  |  |
|------------|---|--|--|
| 1          | The points through which the waste water is being discharged directly into the N-choe should be closed within 15 days by the M.C.   | No reply was received from Municipal Corporation, Chandigarh                                     |  |
| 2          | The draft of action plan will be given by the Environment Deptt. to the Municipal Corporation by today and thereafter the action taken report will be submitted by the Municipal Corporation within todays. | Format for Action Plan has been provided to both Agencies but Action Plan has not been received. |  |
| 3          | The pipeline laid down illegally by the road side vendors near the N-choe should be closed by the M.C. within 3-4 days.   | No reply has been received.  |  |
| 4          | Advertisement should be given by the M.C. in which the team is going for removal of pipeline laid down illegally in the area under the Chandigarh jurisdiction by the roadside vendors near the N-choe.     | provided by Municipal Corporation, Chandigarh  |  |

Thereafter, meeting of all the concerned Head of Departments alongwith their Nodal Officers as well as State Level Special Task Force and District Level Special Task Force was held on 22<sup>ns</sup> October, 2018 under the Chairmanship of Justice Pritam Pal, Chairman, Executing Committee.

As per the directions of Executing Committee reply has been filed by the Municipal Corporation, Chandigarh w.r.t. Solid Waste Management and Waste Water discharge however no reply from Engineering Department, Chandigarh Administration (which is managing some areas of drains & STPs) and Chandigarh Smart City Limited (which is going to upgrade existing STPs & setting up of new STPs).

Sub:- Interim monthly Status Report for Nov w.r.t. O.A. No. 138 of 2016 and O.A. No. 139 of 2016 titled Stench Grips Mansa's Sacred Ghaggar River (Suo-Motu case)

Interim report regarding progress on the points discussed earlier is as follows:

| Sr.<br>No. | Decision taken in the meeting   | Action taken report   |  |  |
|------------|---|---|--|--|
| 1          | Municipal Corporation, Chandigarh and Engineering Department, Chandigarh Administration will upgrade the existing STPs/set up new STPs in their respective jurisdiction to meet with the standards directed by CPCB/CPCC and action plan in this regard alongwith timeline will be submitted within 15 days.  | Submittedby Municipal Corporation on 06.11.2018   |  |  |
| 2          | The officers of Chandigarh Pollution Control Committee (CPCC), Engineering Department Chd. Admn. and Municipal Corporation, Chd. have identified the 10 points where sewerage water is discharged without treatment into SukhnaChoe. Municipal Corporation, Chandigarh and Engineering Department, Chandigarh Administration will take measures to tap these points to ensure that no untreated waste water release into SukhnaChoe. Status report in this regard will be submitted by the M.C. within 15 days. | Corporation, Chandigarh & Engineering Department, Chandigarh Administration is placed at Annexure-I & II. |  |  |
| 3          | Prior intimation shall be given by the CPCC to the Police Deptt. for providing police protection to the officers for carrying out inspection and deputing the beat cops with the team.  | required.   |  |  |
| 4          | Municipal Corporation, Chandigarh will provide the list of industrial plots who have not taken sewer connection.  |   |  |  |
| 5          | Points where waste water is being discharged into N-Choe to be identified in the coming time  | CPCC has provided the list of   |  |  |

| 6  | CPCC will provide the quality of  | 7 points of discharge into N-Choe have been plugged. Only one at Beant Memorial is left now, estimate of approx. 3 crores, for the same is being prepared. 9 Months time is required for the same.  CPCC has provided the Data in |  |
|----|---|---|--|
|    | drains at entry/exit points.  | 2 <sup>rd</sup> meeting (placed at Annexure-IV).  |  |
| 7  | MC, Chd. will provide the details of discharge points at Patiala kiRao and provide the action plan for stoppage of the same.  | the discharge points is in commissioning stage and all the discharge points will be tapped in next three months.  |  |
| 8  | MC, Chd. will identify the people who have laid down illegal pipelines and discharging waste water into storm water drainage system/drains and Public Notice shall be given by the CPCC in this regard      | The sullageidentified as coming through the standpostsstands plugged.   |  |
| 9  | The points through which the waste water is being discharged directly into the N-choe should be closed within 15 days by the M.C.   | Complied as detailed in S.No. 5 above   |  |
| 10 | The draft of action plan will be given by the Environment Deptt. to the Municipal Corporation by today and thereafter the action taken report will be submitted by the Municipal Corporation within todays. |   |  |
| 11 | The pipeline laid down illegally by the road side vendors near the N-choe should be closed by the M.C. within 3-4 days.   |   |  |
| 12 | Advertisement should be given by the M.C. in which the team is going for removal of pipeline laid down illegally in the area under the Chandigarh jurisdiction by the roadside vendors near the N-choe.     | Needful has been done.  |  |

Minutes of 1<sup>st</sup> Meeting of State Level Special Task Force held on 19<sup>th</sup> December, 2018 under the Chairmanship of Worthy Advisor to the Administrator in compliance to the Hon'ble NGT order dated 07.08.2018 in the matter of OA No. 139 of 2016 titled Stench Grips Mansa's Sacred Ghaggar River (Suo-Motu Case) and Yogender Kumar.

1st Meeting of State Level Special Task Force was held on 19th December, 2018 under the Chairmanship of Worthy Advisor to the Administrator in U.T., Secretariat, Sector 9, Chandigarh to discuss the report submitted by District Level Special Force in compliance to the Hon'ble NGT order dated 07.08.2018 in the matter of OA No. 139 of 2016 titled Stench Grips Mansa's Sacred Ghaggar River (Suo-Motu Case) and Yogender Kumar. The list of officials who attended the meeting is enclosed as Annexure-I.

The Chairman welcomed all the Members of State Level Special Task Force as well as officers of Chandigarh Administration. Thereafter the Member Secretary, State Level Special Task Force informed the members about the order of Hon'ble NGT and constitution of Executing Committee, District level Special Task Force and State Level Special Task Force. He further informed that District Level Special Task Force has conducted three meeting and submitted the report to State Level Special Task Force. Accordingly, all the information has been compiled and shown to the members in the form of Power Point Presentation. During presentation, Member Secretary informed about the status of waste water discharge and other related issues. He further informed that water supply in Chandigarh was coming from Bhakra main line through Kajouli and Sector 39 Water Works. Around 67 MGD water is being supplied from this and 22 MGD water is being supplied through tubewells. Total around 89 MGD is being supplied daily to Chandigarh and as per the information provided by Municipal Corporation, Chandigarh total waste water generation is around 58 MGD and treatment capacity is 48.85 MGD. At present 05 Nos. of Sewage Treatment Plants are operational in Chandigarh.

Thereafter, members were apprised of status of waste water discharge points at Sukhna Choe and N-Choe and action taken along with Action plan to stop the same as per details given below:-

| Sr.<br>No. | Point  | Status as on<br>September<br>2018  | Status as on<br>07.12.2018  | Status as on 19.12.2018                                  | Long<br>Term/Short<br>Term<br>Action Plan  |
|------------|--|--|---|--|--|
| 1          | Kishangarh<br>Outlet   | There is sewage water discharge from the outlet.                               | As a short<br>term measure<br>proposal has<br>been<br>submitted to<br>lift the waste<br>water and<br>connect it with<br>sewerage line |  | STP has been<br>proposed to<br>treat the<br>waste water<br>(Will be<br>commissione<br>d by Nov.<br>2022) |
| 2          | Outlet of<br>Village<br>Kishangarh<br>inside Forest<br>Nursery                                 | There is sewage water discharge from the outlet.                               | Still sewage is<br>being<br>discharged  |  | Chandigarh<br>Administrati<br>on will tap<br>the same by<br>31.03.2019.                                  |
| 3          | Outlet of<br>Shastri Nagar   | There is sewage water discharge.   | Sewage water<br>has been<br>tapped.   |  | -  |
| 4          | First outlet of Bapu Dham near bridge on the road connecting IT park with Sector 26 Chandigarh | sewage water<br>discharge at<br>first outlet of<br>Bapu Dham<br>near bridge on |   | Leakage has<br>been<br>plugged                           | -  |
| 5          | Second outle of Bapt Dham Colony (Known a Madrasi Colony)                                      | t There is<br>sewage water<br>discharge at                                     | residents have constructed their toilets on   | All such<br>discharges<br>points<br>have been<br>plugged |  |

|    |  |   | Bapu Dham<br>Colony, so that<br>flow coming<br>into Choe may<br>be plugged.                                |  |   |
|----|--|---|--|--|---|
| 6  | Outlet from<br>back of<br>Gaushala,<br>Industrial<br>Area, Phase-I,<br>Chd.  | There is substantial sewage discharge from back of Gaushala, Industrial Area, Phase-I, Chd.                     |  | Municipal<br>Corporation<br>Chandigarh<br>has plugged<br>the discharge<br>points |   |
| 7  | Outlet near<br>CTU<br>workshop<br>Industrial<br>Area, Phase-I,<br>Chd. (Inside<br>Forest Area)                                   | There is sewage discharge at the outlet near CTU workshop.  | CTU has plugged the waste water flow. Now there is no waste water discharge.                               |  | -   |
| 8  | Indl. Area,<br>Phase - I,<br>Colony No. 4.   | There is discharge from many outlets from Indl. Area, Phase - I, Colony No. 4.                                  | Waste water<br>has already<br>been tapped<br>and diverted<br>to sewer line.                                | •  | 2   |
| 9  | Pump House operated by Municipal Corporation behind Central Poultry Development Organization, Indl. Area, Phase - I, Chandigarh. | In case of Non-<br>operation of<br>pump, waste<br>water directly<br>goes to Sukhna<br>Choe on<br>regular basis. | New stand by motor has already been installed and now no waste water is being discharged into Sukhna Choe. |  | -   |
| 10 | Outlet of<br>Village<br>Hallomajra   | There is substantial sewage discharge from the outlet of  | Around 70%<br>of household<br>have been<br>connected to<br>sewer line and                                  | All the household will be connected to sewer line within time                    | By<br>31.01.2019<br>all the<br>household<br>will be<br>connected to |

|    |               | Village<br>Hallomajra.  | for remaining<br>30% work is<br>under process.  | line. | sewer line. |
|----|---------------|---|---|-------|-------------|
| 11 | Village Daria | There is<br>discharge of<br>sewage water<br>from Village<br>Daria | Excess sewage of unauthorised colony in village Daria has been tapped and put in the sump and the same is being pumped into the sewer line. |       |             |

## Status of N-Choe

| Sr. No. | Point  | Status as on<br>September<br>2018            | Status as<br>on<br>07.12.201<br>8   | Status as<br>on<br>19.12.2018 | Action<br>Plan/Action<br>Taken |
|---------|--|--|---|-------------------------------|--------------------------------|
| 1       | leisure valley                                       | 02 outlets are<br>discharging<br>waste water | Outlets have been plugged. Now there is no waste water discharge.                 | *                             | •                              |
| 2       | Near red cross<br>(Madhya<br>Marg)                   | 01 outlet<br>discharging<br>waste water      | Outlet has<br>been<br>plugged.<br>Now there<br>is no waste<br>water<br>discharge. |                               |                                |
| 3       | Sec 23 near<br>B.D Hospital<br>(Neuro<br>Psychiatry) | 01 outlet<br>discharging<br>waste water      | Outlet has<br>been<br>plugged.<br>Now there<br>is no waste<br>water<br>discharge. | -                             | -                              |

| 4 | Bal Bhawan<br>side                  | Very less<br>discharge                     | Outlet has<br>been<br>plugged.<br>Now there<br>is no waste<br>water<br>discharge. | - | *   |
|---|-------------------------------------|--|---|---|---|
| 5 | 01 outlet in<br>Beant<br>Memorial   | Water logging                              | •   | - | This is major<br>work and will<br>be completed<br>by August,<br>2019.                           |
| 6 | Sector 52<br>(starting)             | Two outlets<br>discharging<br>Sewage Water | -   | - | (related with<br>Sr. No. 5)<br>Will be<br>plugged by<br>31.12.2019                              |
| 7 | Sector 52<br>(End)                  | Two outlets<br>discharging<br>Sewage Water |   | - | One outlet<br>has been<br>plugged and<br>another outlet<br>will be<br>plugged by<br>31.12.2019. |
| 8 | One outlet<br>coming from<br>Sec 51 | Sewage Water                               | Already<br>tapped.  | 2 | -   |

The Member Secretary also informed that the status of existing STPs, under construction STPs and proposed STPs. It was also informed that Chandigarh Smart City Ltd. is going to upgrade existing STPs to treat the waste water upto the level of less than 5 mg/l BOD and the work will be completed by Nov. 2022. The details of STPs are given as under:-

Existing STPs Operational in Chandigarh:-

| Sr. No. | Location of STP | Capacity              |
|---------|-----------------|-----------------------|
| 1.      | Diggian         | 30 MGD (1,36,200 KLD) |
| 2.      | 3 BRD           | 11 MGD (49,940 KLD)   |
| 3.      | Raipur Kalan    | 5 MGD (22,700 KLD)    |
| 4.      | Raipur Khurd    | 1.25 MGD (5,675 KLD)  |
| 5.      | Dhanas          | 1.6 MGD (7,264 KLD)   |

Sewage Treatment Plants under construction:-

| Sr.<br>No. | Location of<br>STPs | Capacity                | Remarks   | Timelines                    |          |
|------------|---------------------|-------------------------|---|------------------------------|----------|
| 1.         | Maloya              | 5 MGD<br>(22,700 KLD)   | Constructed by<br>Municipal Corporation,<br>Chandigarh            | Will operational 31.01.2019  | be<br>by |
| 2          | Raipur Kalan        | 1.25 MGD<br>(5,675 KLD) | Constructed by Engineering Department, Chandigarh Administration. | Will operational 30.06.2019. | be<br>by |

Proposed Sewage Treatment Plant:-

|   | Location of<br>STPs            | Capacity | Remarks          | Timelines  |
|---|--------------------------------|----------|------------------|--|
| 1 | Kishangarh near<br>Sukhna Lake |          | Chandigarh Smart | The state of the s |

Advisor to the Administrator appreciated the action taken on Short Term Plans and advised for continuous monitoring on Long Term Plan. He further suggested that the Municipal Corporation, Chandigarh should explore setting up of localised Sewage Treatment Plants in existing colonies. Commissioner, Municipal Corporation informed that Sewage Treatment Plant of Maloya is now ready and under commissioning stage.

Advisor to the Administrator also directed that if there is any discharge found other than the above points, the same should be stopped immediately.

Member Secretary informed that presently some of the STPs are not running up to the mark and even fail to achieve the designed level of BOD i.e. 30 mg/l. Advisor directed all concerned to look into the matter and to take appropriate action so that all STPs meet the prescribed norms. Sh. Sanjay Arora, Suptt. Engineer, Public Health Chandigarh Admn. informed that gap between the treatment capacity and waste water generation is not correct projection as water loss during transmission has not been accounted for. Thereafter Advisor directed him to provide the exact figures to CPCC so that same can be incorporated in Action Plan to be forwarded to Executing Committee.

Advisor also desired to call Chief Architect, Chandigarh Administration as Special Invitee from next meeting onwards.

The Member Secretary informed the committee about the Industrial Scenario in Chandigarh, Bio-Medical Waste Management, Municipal Solid Waste

Management in Chandigarh, Hazardous Waste Management, Plastic Waste Management and E-Waste Management in Chandigarh, which is being carried out as per the prescribed rules.

District Commissioner, Chairman of the District Level Task Force complimented the Engg. Department of U.T. Admn. and Municipal Corporation for speedy action in stopping the waste water discharge in Sukhna Choe and N-Choe. Advisor also appreciated the efforts of both the Engg. wings and directed to ensure continuous compliance of orders of Hon'ble NGT. The Committee discussed and approved the Action Plan with Timeline of upgradation of existing STPs and setting up of new STPs as well as stopping of discharge of waste water into drains.

The meeting ended with thanks to the Chair.

## Test Results of Industries

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| 14              |                              | 13                                   | 12                                       | 11                                  | 10  | 9  | 00                              | 7  | 6   | 01   | 4                                       | ω                                       | 2                                     | ш                                     | Sr No.            |                                      |              |
|-----------------|------------------------------|--------------------------------------|--|-------------------------------------|---|--|---------------------------------|--|---|--|---|---|---------------------------------------|---------------------------------------|-------------------|--------------------------------------|--------------|
|                 | PASCO Motors                 | Hind Inns & Hatels Ltd.              | Lemon Tree Hotels                        | Freaking Amazing Foods Pvt.<br>Ltd. | Punjab State Co-op. Milk<br>Producer's Fed Ltd. (Milk Plant | Tech Mahindra Ltd.                           | Infosys Limited                 | DLF Info City Developers<br>(Chandigarh) Ltd | Kujjal Builders Hotel (The Lalit) RGCTP, Kishangarh | Rock & Storm Bottlers Pvt. Ltd. Plot No. 214, Indl. Area Ph-I, Chd | Em Pee Motors Ltd.                      | Krishna Automobiles                     | KLG Enterprises (Hotel KLG)           | A.B. MOTORS                           | Name of the Unit  |                                      |              |
| Chd             | Plot No. 2, Indl. Area Ph-I, | Plot No. 15, Indl. Area Ph-I,<br>Chd | Plot No. 3 (MW), Indi. Area<br>Ph-I, Chd | SCO 32, Sec 26, Chd                 | IndL Area, Ph-I, Chd.                                       | PLOT NO.23 (SEZ) PH-II,<br>RGCTP, Kishangarh | PLOT NO.1, RGCTP,<br>Kishangarh | PLOT NO. 2, RGCTP,<br>Kishangarh             | RGCTP, Kishangarh                                   | Plot No. 214, Indl. Area Ph-I,<br>Chd                              | Plot No. 177-H, Indl. Area<br>Ph-I, Chd | Plot No. 177-E, Indl. Area Ph<br>I, Chd | Plot No. 51, Indl. Area Ph-II,<br>Chd | Plot No. 53, Indl. Area Ph-II,<br>Chd | Address           |                                      |              |
| Service Station |                              | Hotel                                | Hotel                                    | Micro Brewery                       | Milk Plant  | IT Industry                                  | IT Industry                     | IT Industry                                  | Hotel   | Bottling Plant   | Service Station                         | Service Station                         | Hotel                                 | Service Station                       | Permissible Limit | Process                              | 88           |
| 7.05            |                              | 7.15                                 | 7.90                                     | 6.95                                | 8.14  | 7.37   | 7.14                            | 7.03   | 7.56  | 6.31   | 7.17                                    | 7.31                                    | 7.18                                  | 7.50                                  | 5.5-9.0           | PH                                   |              |
| 17              |                              | 15                                   | 109                                      | 17                                  | 116   | 35   | 12                              | 20   | 187   | 59   | 80                                      | 189                                     | 10                                    | 13                                    | 600               | TSS<br>(mg/l)                        |              |
| 000             |                              | 64                                   | 375                                      | 13                                  | 153   | 79   | 66                              | 59   | 495   | 13800  | 276                                     | 219                                     | 58                                    | 114                                   | i                 | COD<br>(mg/I)                        | _            |
| 21              |                              | 18                                   | 165                                      | 4                                   | 56  | 42   | 23                              | 31   | 123   | 6750   | 50                                      | 111                                     | 29                                    | 53<br>00                              | 350               | BOD (mg/l)                           | PARAIVIETERS |
| 3.85            |                              | 18.90                                | 38.72                                    | 1.85                                | 2.48  | 37.67  | 45.12                           | 6.34   | 6.34  | 2.91   | 3.60                                    | 3.60                                    | 0.37                                  | 2.48                                  | 50                | BOD (mg/l) NH <sub>s</sub> -N (mg/l) | IEKS         |
| 0.32            |                              | 1.23                                 | 2.04                                     | 0.27                                | 1.78  | 3,92   | 2.09                            | 6.02   | 0.50  | 0.19   | 0.28                                    | 0.39                                    | 0.03                                  | 0.22                                  | 1                 | PO <sub>4</sub> -P<br>(mg/I)         |              |
| 1.1             |                              | 4                                    | Δ  | Δ                                   | 2.3   | 1  | Δ                               | Δ  | Δ   | 13   | 3.5                                     | 2.5                                     | Δ                                     | Δ                                     | 20                | 0& G<br>(mg/l)                       |              |
| Complied        |                              | Complied                             | Complied                                 | Complied                            | Complied  | Complied                                     | Complied                        | Complied                                     | Complied  | Non-Complied   | Complied                                | Complied                                | Complied                              | Complied                              | STATUS            |                                      |              |

| 16  17 Lally Motors Lt  18 G.M.P. Motors | 1200                                  |                     | 200                                   | Charis<br>15                        |                   | Sr No.                               |                   |
|--|---------------------------------------|---------------------|---------------------------------------|-------------------------------------|-------------------|--------------------------------------|-------------------|
| and the same of                          | Motors                                | Lally Motors Ltd.   | Sterling Mobikes Pvt. Ltd.            | Charisma Goldwheels                 |                   | Name of the Unit                     |                   |
| Plot No. 4 (MW), Indl. Area              | Plot No. 128, Indl. Area Ph-I,<br>Chd | Chd Chd. Area Ph-I, | Plot No. 167, Indl. Area Ph-I,<br>Chd | Plot No. 7, Indl. Area Ph-I,<br>Chd |                   | Address                              |                   |
|  | Service Station                       | Service Station     | Service Station                       | Service Station                     | Permissible Limit | Process                              |                   |
|  | 7.05                                  | 7.05                | 7.10                                  | 6.95                                | 5.5-9.0           | рН                                   |                   |
| 3  | 13                                    | 173                 | 00                                    | 112                                 | 600               | TSS<br>(mg/l)                        |                   |
| 137                                      | 106                                   | 247                 | 36                                    | 223                                 | 1                 | (mg/I)                               | P                 |
| 36                                       | 45                                    | 71                  | 11                                    | 63                                  | 350               | BOD (mg/l)                           | <b>PARAMETERS</b> |
| n<br>On                                  | 4.88                                  | 3.42                | 1.51                                  | 3.00                                | 50                | BOD (mg/l) NH <sub>3</sub> -N (mg/l) | TERS              |
| 0 4                                      | 0.38                                  | 0.64                | 0.56                                  | 0.41                                | ****              | PO <sub>4</sub> -P<br>(mg/I)         |                   |
| Δ  | Δ                                     | 1.3                 | Δ                                     | 1.8                                 | 20                | 08. G<br>(mg/l)                      |                   |
| Complied                                 | Complied                              | Complied            | Complied                              | Complied                            |                   | STATUS                               |                   |

## Test Results of Industries

| 7  | en.                     | ıs.                                      | 4                                     | ω                            | N  | jub.                                     | Sr No.                  |                    |            |  |
|--|-------------------------|--|---------------------------------------|------------------------------|--|--|-------------------------|--------------------|------------|--|
| S.G.Industries                             | Thapar industries       | Srijen Exports                           | Deepak Fasteners                      | Groz Beckert Asia<br>Pvt.Ltd | H.S.Fastners                             | Khanna Sanitations<br>Pvt.Ltd            | Sr No. Name of the Unit | Jame of the Unit   |            |  |
| Plot No. 3106,<br>Indl. Area Ph-II,<br>Chd | Indl. Area Ph-I,<br>Chd | Plot No. 280,<br>Indl. Area Ph-I,<br>Chd | 136-140/57<br>Indl. Area Ph-I,<br>Chd | Indl. Area, Ph-I,<br>Chd.    | Plot No. 316,<br>Indl. Area Ph-I,<br>Chd | Plot No. 121,<br>Indl. Area Ph-I,<br>Chd | Address                 |                    |            |  |
| Electroplating                             | Electroplating          | Electroplating                           | Electroplating                        | Electroplating               | Electroplating                           | Electroplating                           | LIMIT ->                | Process            |            |  |
| 6.80                                       | 7.50                    | 2.90                                     | 9.60                                  | 8.89                         | 8.25                                     | 8.50                                     | 6.0-9.0                 | PH                 |            |  |
| 200  | 190                     | 38                                       | 179                                   | 118                          | 205                                      | 486                                      | 100                     | TSS<br>(mg/l)      |            |  |
| 1  | 266                     | 204                                      |                                       | -                            | ****                                     |  | 1                       | (mg/l)             |            |  |
| i  | 59                      | 47                                       | ****                                  | -                            |  |  | į                       | BOD<br>(mg/l)      |            |  |
| 47   | 3.25                    | 6,42                                     | 10.65                                 | 5.43                         | 7.02                                     | 2.74                                     | 50                      | (mg/I)             |            |  |
| 0.80                                       | 0.30                    | 0.23                                     | 0.03                                  | 0.03                         | 0.55                                     | 0.29                                     | s.                      | PO <sub>4</sub> -P |            |  |
| Δ  | Δ                       | Δ  | Δ                                     | Δ                            | Δ  | 1.3                                      | 10                      | 08. G<br>(mg/l)    | PAR        |  |
| Δ  | Δ                       | Δ  | Δ                                     | Δ                            | Δ  | Δ  | s                       | (mg/I)             | AME        |  |
| 61   | <0.1                    | <0.1                                     | 0.114                                 | <0.1                         | 0.113                                    | 0.103                                    | ω                       | Cu<br>(mg/I)       | PARAMETERS |  |
| 0.195                                      | 57.9                    | 30.4                                     | 0.182                                 | Ø.1                          | 0.192                                    | 60.1                                     | S.                      | 2n<br>(mg/1)       |            |  |
| 10.05                                      | 0.023                   | 0.066                                    | <0.01                                 | <0.01                        | 0.017                                    | 0.016                                    | 2                       | (mg/I)             |            |  |
| <0.01                                      | <0.1                    | 0.76                                     | <0,1                                  | <0.1                         | <0.1                                     | <0.1                                     | 0.1                     | Pb<br>(mg/l)       |            |  |
| <0.5                                       | <0.5                    | 449                                      | 0.95                                  | A.5                          | -0.5                                     | 0.5                                      | 3                       | (mg/I)             |            |  |
| <0.5                                       | <0.5                    | 12.8                                     | 3.153                                 | 1                            | 0.5                                      | 0.515                                    | 2                       | Total Cr<br>(mg/l) |            |  |
| BDL  | 308                     | BDL                                      | 901                                   | BDL                          | BDL                                      | BDL                                      | 2                       | Sn<br>(mg/i)       |            |  |
| BDL  | BDL                     | 108                                      | 108                                   | 108                          | BDL                                      | BDL                                      | i                       | Ag<br>(mg/l)       |            |  |
| COMPLIED                                   | NON-COMPLIED            | NON-COMPLIED                             | NON-COMPLIED                          | COMPLIED                     | COMPLIED                                 | COMPLIED                                 |                         | STATUS             |            |  |

