JOINT INSPECTION REPORT

(25.04.2017)

OF

THE SPECIAL INSPECTION COMMITEE

Constituted by

Hon'ble National Green Tribunal

(Order dated 24th April, 2017)

IN THE MATTER OF

M.C. MEHTA VS. UNION OF INDIA

[O.A. NO. 200/2014]

- Submitted by-

Shri R. N. Jindal, Director
Ministry of Environment, Forest and Climate Change

Member Secretary
Uttar Pradesh Pollution Control Board

Shri Sundeep, Director (T-II)
National Mission for Clean Ganga

Member Secretary
Central Pollution Control Board

***Note**:*

This report is to be signed by the Members before filing before Hon'ble NGT. May be some additional/missing observation is conveyed by the Members. They will be mentioned during the hearing and also would simultaneously be updated in the website.

JOINT INSPECTION REPORT OF THE SPECIAL INSPECTION COMMITTEE CARRIED OUT ON 25.04.2017 IN THE MATTER OF M.C. MEHTA VS. UNION OF INDIA [O.A. NO. 200/2014] ON THE DIRECTIONS OF HON'BLE NGT DATED 24.04.207

1. Subject Matter

Matter: M.C. Mehta Vs. Union of India, O.A. No. 200/2014 – C.W.P. 3727/1985.

Subject: Prevention and Control of Pollution of River Ganga – Segment B – Phase I, Haridwar to Kanpur downstream (Unnao).

2. Order of Hon'ble NGT dated 24.04.2017

The Hon'ble Tribunal in the said matter passed the following directions on 24.04.2017 which is placed as under:-

> *Consequently, we hereby constitute a special inspection team consisting of Member Secretary, Central Pollution Control Board; Mr. Sandeep, Director (Tech.), National Mission for Clean Ganga; Mr. R.N. Jindal, Director, Ministry of Environment, Forest and Climate Change and Member Secretary, Uttar Pradesh Pollution Control Board or his nominee being a senior most officer of the Board. This Committee shall inspect the industries tomorrow as follows:-*
>
> *1. The industries will continue to operate to their optimum capacity and would keep all their records ready without default.*
> *2. In the light of above, if any industry is found to be avoiding compliance of directions and to be inoperative, the inspection team shall shut down the same forthwith and it would be sealed by the Committee.*
> *3. The Committee shall be provided all assistance and SHO of the concerned area is also directed to provide Police Assistance to them for proper execution of this order.*
> *4. The inspecting team shall prepare complete and comprehensive report, to be specific, on the following:-*
>
> > *a) What is the source of water used by the industry and its quantity, availability, water meters etc.*
> > *b) Whether the unit are ZLD. ZLD means they are not discharging any effluent, either on the land or in the waterbody or at any other place for that matter. They should be able to either not discharge a drop of liquid or recycle the same entirely without releasing thereto any effluent.*

c) Whether adequate ETPs have been provided and were found to be functional or not at the time of inspection, including its adequacy; performance; and its records thereof.

d) The Committee would collect effluent samples at the inlet and outlet of the ETP and at the point of discharge, at the ultimate end.

e) Whether there is separate provision of Energy Meter for the ETP/ZLD.

f) Whether there are online monitoring system installed and operative and if so connected to which authority, calibration/validation thereof;

g) Whether water flow-meter have been installed.

h) The inspection team shall also analyze the effluent quality at the end of the drain as well as at the point where Mahua starts.

i) The samples shall also be collected from the drain nearest to the industrial unit.

j) The committee may also examine the Ambient Air Quality in that area.

k) Whether any of the industries have a by-pass mechanism provided in the factory, even if it has been now closed or groundwater injection system.

l) The inspection shall also verify the agricultural areas used for disposal of effluent of the industries.

3. The Committee and its execution

In compliance of the directions of Hon'ble NGT, the Committee consisting of Member Secretary, Central Pollution Control Board; Mr. Sundeep, Director (Tech.), National Mission for Clean Ganga; Mr. R.N. Jindal, Director, Ministry of Environment, Forest and Climate Change and Member Secretary, Uttar Pradesh Pollution Control Board visited the area called, Gajraula on 25.04.2017 and inspected the following industries-

1. M/s ASP Sealing Product Ltd., Gajraula
2. M/s. Jubilant Agri & Consumer Products Ltd.(Fertilizer Unit), Bharatigram, Gajraula, District – Amroha, UP
3. M/s. Jubilant Life Sciences Ltd. (Chemical Unit I), Bharatigram, Gajraula, District – Amroha, UP
4. M/s. Jubilant Agri & Consumer Products Ltd. (Polymer unit), Bharatigram, Gajraula.
5. M/s. Jubilant Life Sciences Ltd. (Chemical Unit II).Bharatigram, Gajraula, District – Amroha, UP
6. M/s Jubilant Life Sciences Ltd. (Distillery Unit), Bharatigram, Gajraula, District – Amroha, UP
7. M/s Insilco Ltd., A-5, UPSIDC Industrial Area, Gajraula, UP
8. M/s. Kamakshi Papers Pvt. Ltd., Gajraula
9. M/s Dairy India Private Ltd. Gajraula, Amroha, UP
10. M/s. Kaushambi Papers Mills Pvt. Ltd., Khasra No-138, Naipura Kadar, Dhanaura, Gajraula, Amroha, UP

The Committee focused and concentrated on the issues directed by the Hon'ble NGT w.r.t. each industry. The Committee has also given due attention on the house-keeping, drainage, maintenance of ETP, utilization and disposal of treated effluent, compost making, effluent storages, utilization of groundwater for dilution purpose, solid / hazardous waste management and the impacts of effluents on environment.

4. Collection of Samples

The Committee has collected samples from industries so inspected and samples have been analyzed in CPCB lab for the parameters relevant to that particular industry.

The Committee has further collected, ground water samples for which the local farmers made a reference during the visit. The samples have been analyzed in CPCB laboratory (EPA recognized) following specified methods as per American Public Health Association (APHA) and the guidelines / SoP certified by the National Accreditation Board for Testing and Calibration Laboratories (NABL).

5. Industry-wise Inspection Reports

Altogether 10 industries were inspected by the Committee of which 9 are out of 12 units mentioned and placed before Hon'ble Tribunal by the Learned Counsel of UPPCB. The Industry-wise Inspection Reports are given in **Annexure-I** (Page 16 to 30).

Subsequent to the direction of Hon'ble NGT (dated 28.05.2017), two Senior Scientists of CPCB along with official from NMCG, MoWR, RD & GR visited remaining 3 industries on 01.05.2017 namely:-

1. M/s. Coral News Prints, Gajraula, J P Nagar
2. M/s. Teva API India Ltd. A-2/1, A2/2, UPSIDC Industrial Area Gajraula
3. M/s. Umang Dairies Ltd. 3km. Hasanpur Road, Gajraula

The brief report of these units (without test report) is also given at **Annexure – II** (Page 31 to 33).

6. The Observations / Findings / Recommendations

The unit-wise observations / findings are summarized as under:-

6.1 M/s ASP Sealing Product Ltd., Gajraula

Observation(s):

(i) This unit is an ancillary unit for automobile industries and their products is rubber sealings.

(ii) Industry uses water in boiler, cooling of extruders, coolants along with lubricant for grinding / cutting operations as a result, generating estimate quantity of effluent, around 0.5 KLD.

(iii) Effluent is stored in a holding tank but, near the tank inundated water with oily scum was observed.

(iv) The test report of sample collected from holding tank indicates the results as under:-

pH	: 7.22
COD	: 1599 mg/l (250 mg/l)
BOD	: 389 mg/l (30 mg/l)
TSS	: 585 mg/l (100 mg/l)
Oil & Grease	: 904 mg/l (10 mg/l)

Recommendation(s):

1. The industry shall install effluent treatment plant (ETP) to meet the stipulated standards.
2. Treated water should be utilized for cooling and other low quality water requirement purposes to reduce axillary water requirement.
3. Treated effluent should be properly utilized for gardening.
4. After polishing the effluent, effluent should go back for cooling purpose within the industry thereby reducing the ground water consumption.
5. The oil containers and other solid waste materials needs to be handled as per the provision of Hazardous Waste Rules, after characterization and found applicable. Else, should be managed as per the direction of UPPCB to avoid any littering, open burning or in-secured land disposal to avoid contamination of land and/or around or surface water bodies.

6.2 TO 6.6 M/S JUBILANT LIFE SCIENCES LIMITED, GAJRAULA (COMPLEX),

The Jubilant Group of industries are situated in an integrated complex consisting of

a) Coal based Captive CO-generation Power Plant (48 MW capacity)
b) Molasses based Distillery (305 KLD – Ethyl Alcohol)
c) Chemical Unit 1 (Formaldehyde, Acetaldehyde, Ethyl Acetate, Acetic Acid, Acetic Anhydride, etc,.) and
d) Chemical Unit 2

e) Fertilizer Unit
f) Polymer unit

This industrial complex has common utility services catering to the auxiliary and process support requirement such as:

1. Water Management System (DM Water, Process steam, Spent Solvent Recovery systems)
2. Common Cooling Water blowdown effluent management system (CTRO) – 1200 KLD
3. Chemical Effluent Treatment Plant (CETP) – 700 KLD
4. Incinerators - 3 nos for Liquid – 288 KLD & 2 nos for Gaseous/Thermo Oxidiser – 1500 kg
5. Secured landfill – 11000 MT

As informed by the unit representative, all units were operating with valid consent.

The unit wise findings are as below:

A. Captive Power Plant (48 MW or equivalent capacity)

The integrated chemical complex has a coal based co-generation power plant for its captive requirement of power and steam. It has 2 x 90 TPH (High Pressure Boiler) for turbine operation. The released low-pressure steam from turbine operation is used to meet the process and heating requirements for the industrial units situated within the industrial complex of Jubliant. There are 2 nos. Medium Pressure Boilers (24 TPH an 34 TPH) as a standby as reported.

Observation(s):

1. The power and steam supply to meet the requirement of all units/process in the industrial complex are made from common facility – Captive Power Plant
2. The power plant is coal based facility and has power generation as well as steam generation facility.
3. The boilers are equipped with ESP, however, the management and disposal of bottom ash and fly ash is very poor.
4. No significant or considerable emission from boiler stack was visual observed.
5. The source of water for Captive Power Plant is Ground water,
6. Ambient air quality status within plant area as well as affected zone in the vicinity of the plant was visually observed as very poor. Heavy cloud of fly ash dust arising from the fly ash storage area was affecting the visibility within the industry operation area.
7. Primary assessment based on the discussion with the plant officials revealed that the fly ash is partially utilised and significant amount is stored in their identified storage pond. However, huge dust was arising from the storage area. This was

mainly due to lack of appropriate measures in place to control and prevent resuspension of ash. This also reveal poor fly ash utilisation potential available with the unit.

8. Wet fly ash pond is situated about 3 km from plant premises. Ash slurry is pumped through a closed pipeline, but settled water recycle arrangement from the ash pond was not found.
9. The provisions of Fly Ash management Rules 1999 (amended- 2016) is apparently not complied with by the unit.
10. The percentage utilization of DM water against the installed capacity (88%) vis-à-vis utilization of Power and Steam generation (Coal fired, slop fired and WHRB) which is 58%, suggest that the unit is operating with low ratio of cycle, thereby having higher water consumption.
11. Non-complying

Recommendation(s):

a. The unit shall have a robust and appropriate fly ash management system as per the provision of **fly ash rules**
b. The unit shall install adequate number of dust suppression system at critically identified locations, proper covering of bottom ash and fly ash in the pond, use ash pond as ultimate option for storage, 3 months plan for fly ash utilisation, and promotion and facilitation of brick/tiles manufacturing and other such uses facilities through community entrepreneurship promotion.
c. The units shall use washed coal as per the MoEF notification
d. Proper ash management records shall be maintained and submitted to UPPPCB.
e. The unit shall be instructed to put continuous ambient air quality monitoring station.
f. The industry shall be directed to take a detail water audit of all its water and steam intensive process including their associated utilities/auxiliary services in order to identify the water conservation measures and submit corrective action plan for its implementation to UPPCB.

6.2 M/s Jubiliant Life Sciences Ltd. (Distillery Unit)

(i) The Distillery was found operational at 120 KLD capacity against consented capacity of 305 KLD (Ethyl Alcohol) and adopts both options of effluent treatment acceptable by the CPCB
   a. Bio-composting
   b. Slop Incineration Approach

(ii) The unit claims to have infrastructure to achieve Zero Liquid Discharge (ZLD) by combining both the options.

(iii) The spent wash is subjected to Bio-methanation process for recovery of energy. The bio-methanated spent wash (BMSW) is sent to RO (1200 KLD) where assuming 60% permeate is return to the process for molasses dilution and remaining 40% is subjected for Multiple Evaporation (MEE) The MEE operates

with an efficiency of 70%, i.e., 70% water is recovered and 30% slop generation is stored for either Bio-composting or Slop boiler feed.

(iv) During the time of the visit, all effluent treatment facilities of the distillery Viz. Reverse Osmosis, Multiple Effect Evaporator, Incinerator and Biocomposting were in operation. The Reverse osmosis plant was operating close to its design capacity (54 KL/Hr).

(v) MEE was operating at 40% of its installed capacity at the time of inspection, with about 70% recovery.

(vi) Slop boiler unit was operating at 4 KL/Hr (100 KLD against installed capacity - 300 KLD). The ash from the Slope boiler is disposed to the fly-ash dump yard as reported.

(vii) The Bio-composting facility has capacity to handle approximately (200 T/row x 110 rows x 3 rounds of 90 days each) = 66,000 MT of press mud per annum. Assuming an average 1.5-1.8 m^3 of MEE concentrate / Ton of press mud for final bio-compost output, total consumption of MEE Concentrate will be approximately 1,18,800 cum per annum.

Considering 300 days of slope boiler feed operation, the total MEE reject feed consumed is assessed as (300 days * 300 KLD) = 90,000 cum per annum. So, total reject consumption facility available with the units is as below:

S.No	Description	KLD	KLA (300 days)
A	RO Feed capacity of BMSW	1200	3,60,000
B	RO Reject generation (40% of 1200 KLD)	480	1,44,000
C	MEE feed capacity	1600	4,80,000
D	Remaining capacity of MEE after RO reject (1600 KLD – 480 KLD)	1120	3,36,000
E	Reject generation from MEE (30% of 1600 KLD)	480	1,44,000

Therefore, even the unit has more capacity to utilise the MEE reject, the critical capacity of the wastewater management system is that of MEE installed capacity, which is 1600 KLD. The optimised feed consumption of Bio-Methanated Spent Wash (BMSW) after considering RO reject (40% of feed) and remaining BMSW works out as (A+D) – 1200 +1120 = 2320 KLD.

Assuming the Spent wash generation rate (Continuous process) of 12 Kl per KL of alcohol production, the installed capacity for ZLD achievement through RO + MEE + (Bio-composting/Slope Boiler) is equivalent to (2320/12) – 190 KLD.

The above calculation don't includes other low strength wastewater generated from the distillery process.

Therefore, it is observed that the available infrastructure acceptable to achieve zero liquid discharge from distillery units is only for production of 190 KLD instead of consented capacity of 305 KLD.

(viii) About 3 km away from the plant, there is a compost making yard which has been covered with the shed. However, there was no immediate record shown on the site relating to procurement of press-mud and utilization of spent wash.

(ix) Further, the compost is reported to be given to the marketing companies. This is also to submit that, prior to the selling of compost, the distillery is required to get the compost samples analysed and execute marketing with proper marking / specifications on the bags.

(x) The spent wash has been stored in the lagoon and its storage with huge quantity is of serious concern to the Committee as its management.

(xi) As per the information provided, the bio-compost area is about 30 acres. Certain portion about 3 acres have covered facility, to make it workable during monsoon season. But, there is no provision made for storage of finished compost as per the requirement of CPCB guidelines. However, shed for storage of Press Mud, finished bio-compost, screening and bagging, facility are apparently not available as per CPCB guidelines.

(xii) The unit has a line paccu lagoon of 44,000 cum to holding the MEE reject for use in bio-composting. As reported, the lagoon has not been cleaned for last 5-6 years, and therefore considerable amount of accumulation sludge is there in the pond, which has reduced its holding capacity. In absence of level reading staff, the storage capacity utilised at the time of inspection could not be assessed.

As per CPCB regulatory provision, the holding capacity shall be not more than 30 days of spent wash generation. Considering 305 KLD, the total holding capacity allowed is about (305 KLD x 12 KL/KL x 30 days) = 109800 KLD against the present 44,000 KL (40%). However, the lagoon is not protect (fencing) from outsider trace passing, and having high risk of safety hazards/accident.

(xiii) No ground water monitoring Piezowell based on the ground water flow direction was found near the lagoons or bio-composting plant, however, the unit representative informed, that two such well are available. The details were not provided during the visit.

(xiv) The industry on the spot could not provide the record on utilization of spent wash in RO / MEE / SFB linking with spent wash generation and utilization in corresponding processing unit.

(xv) Near the RO plant, huge flyash deposition was seen in the open ground which incidentally got suspended in air due to sudden strong windy conditions. This has shown the improper management of fly ash (from captive thermal power plant).

(xvi) It was also observed near compost / logoon area, the Committee apprehended the spent wash and utilized compost was spread in the large area and was levelled and covered with earth soil. It is felt that during rainy season the rain water will seep through such area and add colour to the ground water (for quick test, the sample of the ground where compost / spent was and soil was mixed, the samples was taken in a plastic bottle and was filled with the water and the colour obtained is shown in a plate / photo given in **Annexure -III**).

(xvii) Non-complying and subjected for regular monitoring and action plan to improve conditions.

Recommendation(s):

a. The industry shall provide necessary infrastructure fat the bio-compost yard as per the provisions of CPCB guidelines

b. The MEE reject storage lagoon (44000 cum) shall be divided with provision of necessary safety and security measures.

c. There shall be adequate number of groundwater monitoring well in and around compost yard and the monitoring result shall be put in public domain.
d. Inventory records of press mud, bio-compost and wastewater utilization shall be maintained.
e. UPPCB shall modify the consented production capacity of the unit as per the available operational infrastructure to meet the stipulated conditions.

6.3 M/s Jubilant Agro & Consumer Products Ltd.,(Fertilizer unit)

(i) It has been informed that the unit is recycling its effluent into the process and no effluent are required to be disposed.

6.4 M/s. Jubiliant Life Sciences Ltd. (Chemical Unit I) and

6.5 M/s. Jubiliant Agri & Consumer Products Ltd. (Polymer unit)

(i) The effluent generated from the Chemical Plant Unit –I and Polymer unit is treated at the Chemical Effluent Treatment Plant

(ii) There is no MoU between the different units having individual consent to operate for contribution/conveying their effluent to the CETP. Therefore, the primary raw water quality will be subjective and meeting the norms will be a major challenge.

Apart from the operational difficulties, it is difficult to take any action by the regulatory body in case on non-compliance observed to the stipulated norms/ provisions as onus and obligation to meet the regulatory norms is not clear.

(iii) The CETP was found operational during the visit. Water samples from the inlet, outlet and aeration tank – I was collected to assess the performance. Results suggests MLSS concentration to be in acceptable range.

(iv) The hydraulic gradient line of the CETP was non-continuous; an essential parameter to support is proper functioning. It suggest there is a design and/or poor maintenance issue.

(v) The energy meter reading depicts the energy consumed; however, it is very difficult to infer any conclusion on CETP operation status from the consumption data, unless correlation of energy consumed and requirement is defined with a 7-day optimised operation of the CETP facilities.

(vi) The CETP is equipped with online effluent monitoring system and it needs to be verified from the observed value during the field visit to assess the variation, if any.

(vii) The treated wastewater is reported to be used for horticulture within the unit area. There is no documentation / records maintained for the purpose. It needs to be verified to ensure that there is no direct or in-direct discharge of such treated water.

(viii) There was no irrigation plan to utilize treated effluent

(ix) Further the characteristics of inlet and outlet are as under:-

Source	pH	TSS	COD	BOD	MLSS
Inlet	3.26	142	2742	1732	
Outlet	8.12	21	125	28	
Aeration tank					1445

All the concentrations are expressed in mg/l except pH

(x) Non-complying with reference to function aspects of CETP and subject to regular monitoring.

Recommendation(s):

a. All individual consented unit using the common facilities, (Cooling tower water system, steam and CETP etc.) shall have a MoU and identify the ownership and obligatory unit for compliance to stipulated norms. The same shall be considered by UPPCB for issuance of consent to operate.

b. Water balance, steam balance, wastewater generation and return to common system shall be studied in detail and thereafter a proper water balance report shall be prepared. The report shall be submitted to UPPCB within a period of 3 months, before onset of Monsoon. UPPCH shall consider the finding and appropriately modify the consent condition with an objective to conserve groundwater and reduce water consumption/ achieve ZLD.

c. Energy consumption and its correlation with the records of dedicated energy meter for ETPs, Water Meters shall be carried out through a study over a period of 7 days of optimized operation of ETP/CETP. This will help in inferring the energy consumption and operational status of various component and overall performance of CETP/ETP.

6.6 M/s. Jubiliant Life Sciences Ltd. (Chemical Unit II),

This unit manufactures Pyridine and its derivative fine chemical compounds including Cyano Pryridine, Lutidine and Picoline. The committee could not visit this units, however, the effluent from these units are recalcitrant in nature and doesn't qualify for biological treatment. The committee has not visited the process area of these units.

(i) The wastewater generated from these units are primarily non-biodegradable in nature and difficult to be subjected for conventional biological based effluent treatment plant. The recalcitrant nature of wastewater is subjected to thermal process.

(ii) As reported, 3 numbers of liquid incinerator (288 KLD) for management of such wastewater has been provided.

6.7 M/s. Insilco Ltd., Gajraula

(i) This industry is involved in washing / processing of sand used in tyre industries.

(ii) The industry generates effluent having high Total Dissolved Solid (TDS).

(iii) At the time of inspection the effluent being discharged and the collected outlet sample shows TDS of 320 mg/l. However when the samples were picked-up from the Bagad River where the effluent is being disposed indicated TDS of 11284 mg/l.

(iv) The industry is using around 2 MLD of groundwater for diluting of effluent to achieve the standards of prescribed for SAR. Therefore, this industry should essentially operate on ZLD system and by recovery of salt (Na2SO4) with any appropriate system. In no case effluent be disposed in ambient environment.

(v) The characteristics of samples collected are as under:-

Sampling locations	pH	TDS (mg/l)	SAR	SO4-(mg/l)	F-(mg/l)
Inlet	7.17	11112	27.7	5480	4.44
Outlet	7.64	320	6.4	55	0.41
Pond	7.13	10448	34.6	5932	3.92

All the concentrations are expressed in mg/l except pH

(vi) Non-complying. To also opt ZLD

Recommendations;

a. The unit shall stop using fresh water dilution for reducing the SAR in order to comply with the consent condition.

b. The treated water may be explore of its use at nearby industries so that the overall stress on ground water in the area is reduced. This approach shall be through MoU and consent of UPPCB.

6.8 M/s. Kamakshi Papers Pvt. Ltd. Gajraula

(i) This industry is utilizing waste paper for manufacturing newsprint paper.

(ii) The sludge drying beds were flooding. The industry reported that hard board manufacturers could not lift this sludge which they use as raw material.

(iii) The results of the ETP are as under:-

Source	**TSS**	**COD**	**BOD**
Inlet	761	474	113
Outlet	58	222	52

All the concentrations are expressed in mg/l except pH

(iv) The ETP shows higher value of BOD, COD, exceeding the prescribed limits and the treated effluent are used in the process and applied on land for irrigation purpose thereby not discharging.

(v) There is a bypass arrangement which should be sealed.

(vi) Non-complying – require to block by-pass and de-sludge

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6.9 M/s. Dairy India Pvt. Lid, Gajraula

(i) There ETP was operational and growth of algae in aeration tank indicated improper function of the aeration tank.

(ii) The treated effluent is being claimed to be utilized for gardening. The treated effluent shows higher value of BOD.

(iii) Permission from the CGWA is not available.

(vii) The results of the outlet sample collected from ETP are as under:-

Source	pH	TSS (mg/l)	COD (mg/l)	BOD (mg/l)
Inlet	4.35	1700	5344	1025
Outlet	8.40	37	142	**53**

(viii) Non-complying. Need to improve ETP functioning

6.10 M/s. Kaushambi Papers Mills Pvt. Ltd.

(i) Waste was strewed around the campus and was piled on the land claimed to be owned by the unit

(ii) Sludge was not properly stored and was found outside of the premises also.

(iii) Not operating due to mechanical fault.

7. Ambient Conditions

The special team has reached Gajraula and collected samples from the Bagad drain from NH 24. The upstream of the drain was also traced and found to be dry before the confluence of the industrial effluent from M/s Insilco Ltd., A-5, UPSIDC Industrial Area, Gajraula, UP. The Bagad drain is also known as Barad river which is presently dry at upstream of effluent disposal point of Insilco.

Dry Bagad drain before effluent disposal point from M/s Insilco Ltd

Samples collected from Bagad from the bridge of NH-24

The analysis result of the samples collected from of the drains at NH-24 are as follows;

Source	**pH**	**COD**	**BOD**	**TDS**	**SAR**	**NH3-N**
Inlet	7.24	68	18	**11284**	29.9	BDL

All the concentrations are expressed in mg/l except pH

Samples were also collected from the groundwater of the agriculture near the railway line in between the Jubilant Industrial complex and the compost yard located indicates yellow reddish colour and as per the villagers that was effect of previous practice of ferti-irrigation of the M/s Jubilant Life Sciences Ltd. (Distillery Unit).

Ground sampling point

Bagad River sampling point

Analysis result of the ground water:

Source	pH	EC	TDS	COD	BOD	Total Alka as	Total hardne	Calciu m as	Chlorid e	Sulphat e	NO2-N	NO3-NO3	Fluorid e
Grou nd water	7.8	168 8	982	**52**	3	198	520	200	107	467	0.0 8	0.8 1	0.4 6

Further, the poinwise information gathered by the committee on 13 points as per order is given in **Annexure – IV**

7. Conclusion:

The committee based on the inspection carried out in 9 units has reached to the following conclusion:-

A. Ground water is the only source for all industries. The industries are not having regards for ground water depletion or conservation. Water conservation through high degree of recycle and reuse to minimize stress on ground water were not observed.

B. Ground water recharging / rain water harvesting facilities were not highlighted by the industries to the committee during the visit by nay of the industries.

C. Permission from Central Ground Water Board were not available with the industries at the time of visit.

D. All industries claim to use treated wastewater (Industrial/sewage) for gardening / horticulture. There is no provision to deal with treated wastewater during rainy season, therefore, there will be discharge during rainy days, irrespective of land area available to the industries for irrigation. Thereby, reuse and recycle of treated water within the industrial process, utilities are essential with adequate storage facility to cater the storage capacity during non-irrigation period.

E. The ground water sample collected from irrigated farm land was showing colour (Pale yellow). This may be attributed to the past disposal practices of spent wash in the contiguous area.

F. Records and data supporting Water balance, wastewater management, compliance to the condition of consent issued by UPPCB were readily not available with the industry.

G. Based on the available infrastructure and explained utilization mechanism of treated wastewater management system of all industries, the committee has strong apprehension that the units are not operating as Zero Liquid Discharge (ZLD). The discharges are through unauthorized ways (to low laying area etc.) under the cover of horticulture/ irrigation purposes.

H. Water balance report shall be submitted by all industries to UPPCB and after verification, modification in operating consent condition may be made, wherever found necessary,

I. The unit wise observation and associated recommendation(s) made by the committee, shall be assessed by UPPCB and the industry and appropriate measure shall be submitted as time bound action plan in form of Affidavit to Honb'le NGT for its compliance, before the units are considered to start its operation.

J. Community Monitoring system for close compliance verification shall be considered with members selected by local authority consisting of locals, farmers, eminent person of the area, subject and industry process experts, representative from PCBs, Industry department. The finding and action taken report shall be put on district administration website.

K. Physical outlet of ETPs indicate that regular operations are not ensured which was evident due to maintenance of tanks, clafifier, sludge drying beds etc.

8. Units visited on 01.05.2017

Pursuant to the order of Hon'ble Tribunal dated 28.05.2017, CPCB deputed two senior scientist with UPPCB & NMCG to inspect 3 remaining units namely:- i) M/s. Umang Diary Ltd., ii) M/s. Teva API Ltd. & iii) M/s. Coral Newsprint Ltd. At the time of writing the report, analytical reports were awaited (will be ready by this week). However, the observation on report is given on these units (Page No. 31- to 33)

Annexure-I

Details of the Individual Units

1. M/s. ASP Sealing Products Ltd.

Sl. No.	General Information					
1.	Name and address of the Industry	**M/s. ASP Sealing Products Ltd.** A-7, UPSIDC Industrial Area, Gajraula, Dist. Jyotiba, Phule Nagar (UP) 244235				
2.	Contact Person & No.	V K Updadhay 7055978605				
3.	Name of Product	Sealing Product				
4.	Consent for air	Valid upto : 31/12/17 (Copy enclosed)				
	Consent for water	Valid upto : 31/12/17 (Copy enclosed)				
5.	Water Source	Ground Water CGWA Permission applied				
6.	Water consumption	As per the copy of the logbook, the units is having two pumps and about 24 KLD water is withdrawn				
7.	**Samples (from Storage Pit) analysis results**					
	Parameters	pH	TSS (mg/l)	COD (mg/l)	BOD (mg/l)	Oil & grease (mg/l)
	Samples from the units	7.22	585	1599	389	904
	General discharge standards (land)	5.5-9.0	200	250	100	10

Photographs

Floor washing are not being collected properly

Observations:

- Dry processing units, however, spillage of water was observed which is stored in sump
- No treatment facility is available and untreated wastewater is being utilised for gardening.
- The quality of wastewater sample collected from the units indicates non-compliance to **BOD 389 mg/l, COD 1599 mg/l, Oil & Grease 904 mg/l and TSS, 585 mg/l.**

Recommendation(s)

1. The unit should have a properly designed Effluent Treatment Plant (ETP) and comply with the stipulated norms.
2. The water balance study shall be carried out and submitted to UPPCB for better transparency in water management and imposing appropriate consent condition for operation.

2. M/s Jubiliant Life Sciences Ltd. (Distillery Unit)

1.	Name of the unit and address	**M/s Jubiliant Life Sciences Ltd. (Distillery Unit),** Bharatigram, Gajraula, District – Amroha, U.P,-244223	
2.	Name of the Contact person – Designation Contact No.	C B Bhardwaj | Senior Vice President - Manufacturing (Unit Head) Mobile: 8126424555 FAX: 05924-252352	
3.	Year of Commissioning.	1982	
4.	Sector	Private	
5.	Production details. • Products • Installed Prod. Cap. • Operating capacity	Alcohol 305 KLD 120 KLD (on the day of inspection).	
6.	Manufacturing process details & flow diagram	Flow Diagram	
7.	Raw material	1. Molasses : 14000 MT/day	
8.	Operational status	Operating	
B: Water Pollution and its Control:			
1.	Water Consumption (m^3/day)	Industrial	2500 KLD
		Domestic	20 KLD
		Make up water cooling tower	600 KLD
2.	Sources water	Ground Water through borewell (NOC obtained from CGWA on 7/4/2017 for **3000 KLD**)	
3.	Effluent Generation (m^3/day)	Spent wash 12 KL/KL of alcohol	
4.	Details of Spent Wash Management	Bio-methansation - RO (1200 m^3 /day) → MEE (1600 m^3 /day)→ Bio compost/slope boiler	
5.	Status of consent (**Copy of the latest consent attached)**	Consent for water Valid up to 31.12.2018 Consent for air Valid up to 31.12.2018	

Spent Wash Management Bio-composting		
1.	Total area available for bio-composting [1ha=2.5 acres]	30 acres
2.	Active area for bio compost preparation (acres)	30 acres
3.	Facility for press mud storage	Area for press mud storage -6 acres
4.	Facility for bio compost storage	3 acres
5.	Spent wash storage capacity (m^3)	One lagoon of capacity 44,000 m3
6.	Arrangement for rainy season (Balance press mud storage facility, compost storage, shaded etc	Shed was constructed in 3 acres for rainy season. On the day of inspection whole area was filled with press mud/compost.
7.	Adequacy of the system a. Compost yard (lining, area, catch pits etc. b. Special precaution for undigested spent wash	Composed yard is having 1000 M^2shed. Stored in Lined lagoon

	utilization for making bio compost	
	c. Composting process and quality of finished product (spraying and churning arrangement and availability of pipe network)	Windrows method over a lined platform.
	d. Storage facility for press mud and finished product	Both press mud and finished product were stored in an open area.
	e. Equipment and machinery (tractor, aerotiler, bagging machine , weighing machine loader, etc	Aerotilers, trucks & JCB is available. Bagging and weighing facility not available
Volume Reduction System		
1.	**Filtration system** Design capacity of RO Plant /Nano filtration (feed rate, m^3 , hr	RO plant is available with feed rate of 1200 m^3 /d
2.	Details of pre-treatment of effluent being fed to RO	Bio-methanation
3.	Operating condition a. Effluent feed rate (m^3/hr) b. Operating pressure (kPa) c. Reject generation (m^3/hr) d. Permeate (m^3/hr)	 52 m^3/hr 29 cum/hr 23.8 m^3/hr
4.	Facility for permeate storage and its management(recycle/reuse/ discharge)	Permeate is recycled to distillery for molasses dilution
5.	Waste water generation	Not assessed
6.	Power consumption (kWhr)	Not assessed
Evaporation system		
1. 1.	Design capacity of evaporator Number of effect in evaporator	1600 m^3/day 5
2.	Steam consumption (tonne/hr & temp in each effect)	250 KT/KT of feed
3.	Generation of condensate (m3/hr) from each effect	70% of total feed
4.	Normal uninterrupted operating time (hr)	20 days/month
5.	Frequency of cleaning of plates / tubes	Once in 20 days
6.	Waste water generated from cleaning operation (m^3) and disposal system	200 KL/month and
7.	Cleaning mechanism (manual / mechanical)	Mechanical

8.	Management of concentrate (bio-composting/incineration)	Concentrate is used as a fuel in boilers and feed for bio-compost

Observations:

1. The Distillery was found operational at 120 KLD capacity against consented capacity of 305 KLD (Ethyl Alcohol) and adopts both options of effluent treatment acceptable by the CPCB
    a. Bio-composting
    b. Slop Incineration Approach
2. The unit claims to have infrastructure to achieve Zero Liquid Discharge (ZLD) by combining both the options.
3. The spent wash is subjected to Bio-methanation process for recovery of energy. The bio-methanated spent wash (BMSW) is sent to RO (1200 KLD) where 60% permeate is return to the process for molasses dilution and remaining 40% is subjected for Multiple Evaporation (MEE) The MEE operates with an efficiency of 70%, i.e., 70% water is recovered and 30% slop generation is stored for either Bio-composting or Slop boiler feed.
4. During the time of the visit, all effluent treatment facilities of the distillery Viz. Reverse Osmosis, Multiple Effect Evaporator, Incinerator and Biocomposting were in operation. The Reverse osmosis plant was operating close to its design capacity (54 KL/Hr).
5. MEE was operating at 40% of its installed capacity at the time of inspection, with about 70% recovery.
6. Slop boiler unit was operating at 4 KL/Hr (100 KLD against installed capacity - 300 KLD). The ash from the Slope boiler is disposed to the fly-ash dump yard as reported.
7. The Bio-composting facility has capacity to handle approximately (200 T/row x 110 rows x 3 rounds of 90 days each) = 66,000 MT of press mud per annum. Assuming an average 1.5-1.8 m^3 of MEE concentrate / Ton of press mud for final bio-compost output, total consumption of MEE Concentrate will be approximately 1,18,800 cum per annum.

    Considering 300 days of slope boiler feed operation, the total MEE reject feed consumed is assessed as (300 days * 300 KLD) = 90,000 cum per annum.
    So, total reject consumption facility available with the units is as below:

S.No	Description	KLD	KLA (300 days)
A	RO Feed capacity of BMSW	1200	3,60,000
B	RO Reject generation (40% of 1200 KLD)	480	1,44,000
C	MEE feed capacity	1600	4,80,000
D	Remaining capacity of MEE after RO reject (1600 KLD – 480 KLD)	1120	3,36,000
E	Reject generation from MEE (30% of 1600 KLD)	480	1,44,000

    Therefore, even the unit has more capacity to utilise the MEE reject, the critical capacity of the wastewater management system is that of MEE installed capacity, which is 1600 KLD. The optimised feed consumption of Bio-Methanated Spent Wash (BMSW) after considering RO reject (40% of feed) and remaining BMSW works out as (A+D) = 1200 +1120 = 2320 KLD.

    Assuming the Spent wash generation rate (Continuous process) of 12 Kl per KL of alcohol production, the installed capacity for ZLD achievement through RO + MEE + (Bio-composting/Slope Boiler) is equivalent to (2320/12) = 190 KLD. (As per charter spent wash generation is 8-12 KL/Kl of alcohol production)

    The above calculation don't includes other low strength wastewater generated from the distillery process.

    Therefore, it is observed that the available infrastructure acceptable to achieve zero liquid discharge from distillery units is only for production of 190 KLD instead of consented capacity of 305 KLD.

8. As per the information provided, the bio-compost area is about 30 acres. Certain portion about 3 acres have covered facility, to make it workable during monsoon season. But, there is no provision made for storage of finished compost as per the requirement of CPCB guidelines. However, shed for storage of Press Mud, finished bio-compost, screening and bagging, facility are apparently not available as per CPCB guidelines.

9. The unit has a line paccu lagoon of 44,000 cum to holding the MEE reject for use in bio-composting. As reported, the lagoon has not been cleaned for last 5-6 years, and therefore considerable amount of accumulation sludge is there in the pond, which has reduced its holding capacity. In absence of level reading staff, the storage capacity utilised at the time of inspection could not be assessed.

   As per CPCB regulatory provision, the holding capacity shall be not more than 30 days of spent wash generation. Considering 305 KLD, the total holding capacity allowed is about (305 KLD x 12 KL/KL x 30 days) = 109800 KLD against the present 44,000 KL (40%). However, the lagoon is not protect (fencing) from outsider trace passing, and having high risk of safety hazards/accident.

10. No ground water monitoring Piezowell based on the ground water flow direction was found near the lagoons or bio-composting plant, however, the unit representative informed, that two such well are available. The details were not provided during the visit.
11. The industry on the spot could not provide the record on utilization of spent wash in RO / MEE / SFB linking with spent wash generation and utilization in corresponding processing unit.
12. Near the RO plant huge fly ash deposition was seen in the open ground which inadvertently got suspended in air due to sudden strong windy conditions. This has shown the improper management of fly ash (from captive thermal power plant).
13. Further the compost is reported to be given to the marketing company for further movement. This is also to submit that prior to the selling of compost, the distillery is required to get the compost samples analyzed and execute marketing with proper marking / specifications on the bags.
14. It was also observed that the near the compost / logoon area, the committee apprehended the spent was and utilized compost was spread in the large area and was levelled and covered with earth soil. The committee felt that during rainy season the rain water will seep through such area and may cause coloration in the ground water (for quick crude test and following crude test the surface of the ground where compost / spent was and soil was mixed and was taken in a plastic bottle and was filled with the water and the colour obtained is shown in a plate / photo given in Annexure-III).

3. M/s Jubilant Agro & Consumer Products Ltd.,(Fertilizer unit)

01	Name of the industry & Complete Postal Address:	2 **M/s Jubilant Agro & Consumer Products Ltd.,(Fertilizer unit)** Bhartiagram, Gajraula, Distt: Jyotiba Phule Nagar – 244223,Uttar Pradesh		
02	Name of Contact person with designation Phone & Fax No/Email:	C B Bhardwaj | Senior Vice President - Manufacturing (Unit Head) Mobile: 8126424555 FAX: 05924-252352		
03	Year of commissioning	1982		
05	Installed Capacity, TPA	Sulphuric Acid-72000 TPA, Single Super Phosphate		
	Product & By product	1. Single Super Phosphate 2. Granulated SSP 3. Sulphuric Acid		
07	Status of consents & Authorization (validity)	Sl. No.	Consent under	Validity Upto
		1.	Air Act	31.12.2017
		2.	Water Act	31.12.2017
		3.	Hazardous Waste.	03.03.2021
09	**Raw material used / tonne of product**			
	Raw Materials	Sulphur, Rock Phosphate		
	Sources water	Ground Water through borewell (NOC obtained from CGWA on 7/4/2017 for **1400 KLD**)		
12	The waste water generated is recycled in the process			
	Observations :			

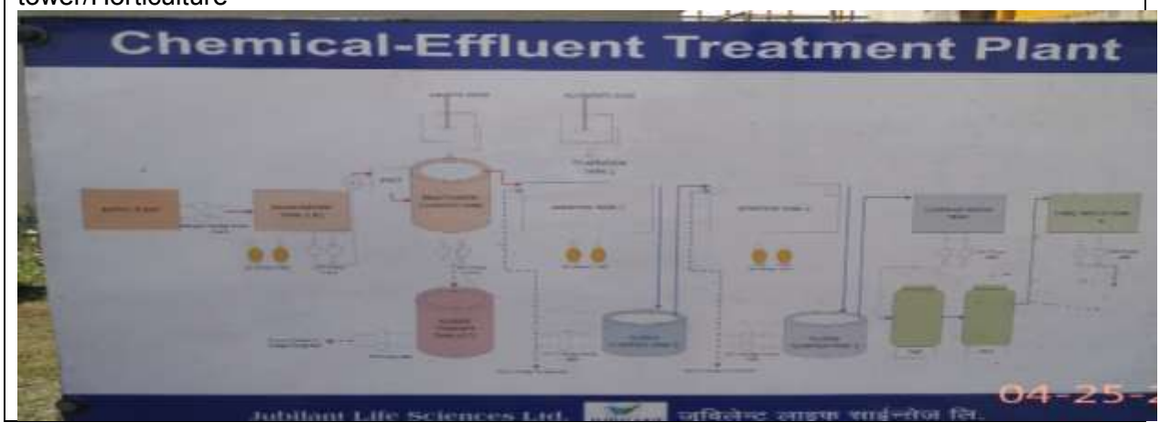
4. M/s. Jubiliant Life Sciences Ltd. (Chemical Unit I)

01	Name of the industry & Complete Postal Address:	3 **M/s. Jubiliant Life Sciences Ltd. (Chemical Unit I),** Bharatigram, Gajraula, District – Amroha, UP		
02	Name of Contact person with designation Phone & Fax No/Email:	C B Bhardwaj | Senior Vice President - Manufacturing (Unit Head) Mobile: 8126424555 FAX: 05924-252352		
03	Year of commissioning	1982		
05	Products & Installed Capacity, TPA	Acetaldehyde - 246600TPA Formaldehyde – 140400TPA Acetic anhydride – 39000 TPA Ethyl Acetate – 89425 TPA Acetic Acid – 210300 TPA		
	Raw Materials, TPA	Acetaldehyde- Ethanol-1.084 kl/MT Formaldehyde- Methanol – 0.42 MT/MT Acetic acid -1.227 MT/MT Ethyl acetate – Ethyl alcohol -0.73 KL/MT Acetic acid –Acetaldehyde -0.88 MT/MT		
07	Status of consents & Authorization (validity) **(Copy enclosed)**	Sl. No.	Consent under	Validity Upto
		4.	Air Act	31.12.2018
		5.	Water Act	31.12.2018
		6.	Hazardous Waste.	15.12.2017
	Total Water Requirement	2351 KLD (including Domestic water requirement 375 KLD) (**Water balance flow diagram enclosed**)		
	Sources water	Ground Water through borewell (NOC obtained from CGWA on 7/4/2017 for **2300 KLD**)		
	Waste water generation	175 KLD goes to CETP		
Effluent Treatment Plants:				
Operational Status (during inspection):				

Installed Treatment Capacity, (m3/day)	The wastewater generated from Chemical Unit – 1, and Polymer Plant are collected and treated at the Chemical Effluent Treatment Plant (CETP). The CETP of 700 KLD capacity was found operational. (CETP flow diagram enclosed)

ETP & Sequence of Treatment Plant:

Process of the CETP are as follows:
Acetyl Plant →Equalization Tank (1 & 2) → Reactivator Clarifier tank → Aeration Tank 1→ Sludge Clarifier tank → Aeration Tank → Sludge Clarifier Tank 2 → Clarifier Water Tank → Pressure Sand Filter (PSF)→ Activated Carbon Filter (ACF)→ Final Water Tank → Cooling tower/Horticulture



5. M/s. Jubiliant Agri & Consumer Products Ltd. (Polymer unit)

01	Name of the industry & Complete Postal Address:	**M/s. Jubiliant Agri & Consumer Products Ltd. (Polymer unit)** Bharatigram, Gajraula.		
02	Name of Contact person with designation Phone & Fax No/Email:	C B Bhardwaj | Senior Vice President - Manufacturing (Unit Head) Mobile: 8126424555 FAX: 05924-252352		
03	Year of commissioning	1982		
05	Products & Installed Capacity, TPA	SPVA, PVA & Derivatives – 2458 MT/Month Wood finish – 450 MT/month Polyurethane & Derivatives		
	Raw Materials, TPA	Soild PVA • Iso Propyl Alcohol • Vinyl Acetate Monomer • Di laurl Peroxide Wood Finish • Acetone • Xylene • Toulene • Ethyl Cellusolve • N Butanol • Ethyl Acetate		
07	Status of consents & Authorization (validity)	Sl. No.	Consent under	Validity Upto
		1.	Air Act	31.12.2017
		2.	Water Act	31.12.2017
		3.	Hazardous Waste.	15.12.2017
	Total Water Requirement	250 KLD		
	Sources water	Ground Water through borewell (NOC obtained from CGWA on 7/4/2017 for **250 KLD**)		
	Waste water generation	571 KLD goes to CETP		

	Effluent Sample Collected and analysis results	**Locations**	**pH**	**TSS (mg/l)**	**COD (mg/l)**	**BOD (mg/l)**	**MLSS (mg/l)**
		CETP Inlet	3.26	142	2742	1732	
		CETP Outlet	8.12	21	125	28	
		Area ration Tank	-	-	-	-	1445
		Standards (Discharge on land)		200	250	100	
	Photographs						
							
	No over flow from Clarifier						
							
	Online flow meter installed at the CETP						
							
	Ash Pond filled up with garbage						

	Observations: 1. There is no MoU between the different units having individual consent to operate for contribution/conveying their effluent to the CETP. Therefore, the primary raw water quality will be subjective and meeting the norms will be a major challenge. Apart from the operational difficulties, it is difficult to take any action by the regulatory body in case on non-compliance observed to the stipulated norms/ provisions as onus and obligation to meet the regulatory norms is not clear. 2. The CETP was found operational during the visit. Water samples from the inlet, outlet and aeration tank – I was collected to assess the performance. Results suggests MLSS concentration to be in acceptable range. 3. The hydraulic gradient line of the CETP was non-continuous; an essential parameter to support is proper functioning. It suggest there is a design and/or poor maintenance issue. 4. The energy meter reading depicts the energy consumed; however, it is very difficult to infer any conclusion on CETP operation status from the consumption data, unless correlation of energy consumed and requirement is defined with a 7-day optimised operation of the CETP facilities. 5. The CETP is equipped with online effluent monitoring system and it needs to be verified from the observed value during the field visit to assess the variation, if any. 6. The treated wastewater is reported to be used for horticulture within the unit area. There is no documentation / records maintained for the purpose. It needs to be verified to ensure that there is no direct or in-direct discharge of such treated water.

6. M/s. Jubiliant Life Sciences Ltd. (Chemical Unit II)

01	Name of the industry & Complete Postal Address:	**M/s. Jubiliant Life Sciences Ltd. (Chemical Unit II),** Bharatigram, Gajraula, District – Amroha, UP		
02	Name of Contact person with designation Phone & Fax No/Email:	C B Bhardwaj | Senior Vice President - Manufacturing (Unit Head) Mobile: 8126424555 FAX: 05924-252352		
03	Year of commissioning	1982		
05	Products & Installed Capacity, TPA	Pyridine -152 T/day Pyridine derivatives -30 T/day		
	Raw Materials, TPA	Pyridine –Acetaldehyde 1.335 MT/MT, Formalin -2.57 MT/MT and Ammonia -0.49 MT/MT is consumed of pyridine production respectively.		
07	Status of consents & Authorization (validity)	Sl. No.	Consent under	Validity Upto
		1.	Air Act	31.12.2018
		2.	Water Act	31.12.2018
		3.	Hazardous Waste.	15.12.2017
09	**Raw material used / tonne of product**			
	Raw Materials	Sulphur, Rock Phosphate		
	Total Water Requirement	2632 KLD (including Domestic water requirement 30 KLD) (**Water balance flow diagram enclosed**)		
	Sources water	Ground Water through borewell (NOC obtained from CGWA on 7/4/2017 for **2600 KLD**)		
	Waste water generation	571 KLD		
12	**Effluent Treatment Plants:** MEE → Incinerator Concentrate of 222 KLD is burned in the Incinerator , The condensate is recycled in the cooling tower			
	Observations: 1. The wastewater generated from these units are primarily non-biodegradable in nature and cannot be subjected to conventional biological based effluent treatment plant. The recalcitrant nature of wastewater is subjected to incineration process. 2. As reported, 3 numbers of liquid incinerator (288 KLD) for management of such wastewater has been provided.			

7. M/s Insilco Ltd.,

A	**General Information & Production Details:**						
01	Name of the industry & Complete Postal Address:	**M/s Insilco Ltd.,** A-5 UPSIDC Industrial Area Bhartiagram, Gajraula, J. P. Naaar, UP, India					
02	Name of Contact person with designation Phone & Fax No/Email:	Mr. Neeraj Arora G.M. (Works) & Plant Head 05924-252830, Mob. 08449718695 05924-252348 Neeraj.arora@evonik.com					
04	Date/Year of commissioning	May, 1992					
05	Product & Installed production capacity (TPD) for each product	Precipitated Silica & 21,000 TPA Presently operating at 16200TPA Precipitated Silicon dioxide (Amorphous) No By product					
08	Raw material consumed (Tons per ton of product)	Sodium silicate & Sulphuric acid					
09	Total Water requirement (M^3/day)	Process	3500 KLD				
		Washing	-				
		Domestic	8 KLD				
		Others (Specify)	-				
		Total	-				
10	Sources of Water	Bore Well Qty of Water is 4319 m^3/day (Avg. per day for first quarter Jan, Feb & March - 2017) – **CGWA Permission – APPLIED**					
	Separate Energy Meter	Installed (log book copy provided)					
B	**Waste Water – Generation & Treatment:**						
11	Wastewater generation, (M^3/dav)	As per consent	Present status				
	Process effluent	6449 KLD	3900 KLD				
	Effluent Characteristics						
	Sampling locations	pH	TDS (mg/l)	SAR	SO4- (mg/l)	F- (mg/l)	
	Inlet	7.17	11112	27.7	5480	4.44	
	Outlet	7.64	320	6.4	55	0.41	
	Pond	7.13	10448	34.6	5932	3.92	
	Observations: (i) This industry is involved in washing / processing of sand used in tyre industries. (ii) The industry generates effluent having high Total Dissolved Solid (TDS). (iii) At the time of inspection the effluent being discharged and the collected outlet sample shows TDS of 320 mg/l. However when the samples were picked-up from the Bagad river where the effluent is being disposed indicated TDS of 11284 mg/l. (iv) The Committee was deeply concerned after knowing that the industry is using around 2 MLD of groundwater for diluting of effluent. The dilution water is added with another chemical to reduce the SAT, which is not the appropriate and acceptable approach to meet the stipulated norms of prescribed SAR. Therefore, this industry should essentially to operate on ZLD system and by recovery salt (Na2SO4) with any appropriate system. In no case effluent be disposed in ambient environment.						

8. M/S Kamakshi Papers (P) Ltd.

01	Name of the industry & Complete Postal Address:	**M/S Kamakshi Papers (P) Ltd.,** Industrial Estate, Delhi Road, Gajraula, Post – Bhartiyagam (Amroha) U.P. - 244223			
02	Name of Contact person with designation Phone & Fax No/Email:	Raj Kumar Agrawal (Director) 8057900800 kamakshi.papers@gmail.com			
03	Year of commissioning	August 1994			
04	Category of Industry	Medium			
05	Installed Capacity, TPA	Initially 20 TPD. Extended to 60 TPD in September, 2016. (21,600 MT) (Approx.) Trial Consent enclosed.			
06	Energy required, KWH/MT	**Year**	**2016-17**	**2015-16**	**2014-15**
			1700	975	975
07	Status of consents & Authorization (validity)	a. Air Consent: Up to 31-12-2016 (invalid) b. Water Consent: Up to 31-12-2016 (invalid) c. HW Authorisation: NA			

08	Product manufactured in TPD/TPM/TPA				
	S.No.	**Product (grade/type) & By Product manufactured**	**Product manufactured in MTA**		
			2016-17 (Up to Nov. 2016)	**2015-16**	**2014-15**
	01	News print	3741.276	6032.97	5932.02
	02	Writing printing paper	1147.527	1187.06	671.108
09	Raw material used / tonne of product				
	S.No.	**Raw Materials**	**Raw Material Consumption Per tonne of Product**		
			2016-17	**2015-16**	**2014-15**
	01	Waste paper	1.337 (Total 6534 TPA)	1.351 (Total 9754.315 TPA)	1.327 (Total 8760.659 TPA)
10	Process details with Material Balance: Waste paper→ High consistency pulper→ Poir→ HD Cleaner→ Hole screen → Decker thickener → Potcher washing → Refiner → Mixing chest → Paper machine				
	Sources water	Ground Water through borewell (NOC obtained from CGWA on 21/3/2017 for **500 KLD**)			

11	Water Consumption & Waste Water Generated:				
	S.No.		**Water Consumption, KLD**	**Wastewater Generated, KLD**	**Water Consumption KL/MT of Paper produced**
	01	Process	387.9	411.48	12.99
	04	Domestic	5	-	
12	Effluent Treatment facilities provided**:** **Fibre Recovery System → Equalization Tank →Primary clarifier → aeration Tank→ Secondary clarifer→ Irrigation**				
	Sample collected form ETP analysed and results are:				
	Parameters	**pH**	**TSS**	**BOD**	**COD**
	Inlet of ETP	6.77	761	113	474
	Final treated effluent	6.90	58	**52**	222
	Standards (as per consent)	-	100	30	-

13		
	ETP sludge storage tank not managed	Outlet of Secondary clarifier
	Observations: 1. The unit is operating without valid consent as consent for trial run has been expired on 31.12.2016 2. The unit provided certain documents showing agreement with the farmers, who have declared that they are using the treated wastewater from the Unit for agriculture purpose and willing to take further water for a period 1st Jan to 31 Dec 2017. However, the declaration does not provide information on the area of land and quantity required in different months, thereby it seems that the provision is more of manage rather than intent to utilise the treated wastewater. 3. It is therefore submitted that the unit is not a ZLD unit and there is enough scope for discharge of treated wastewater to nearby environment, low lying area etc.	
	Recommendation The unit shall obtain valid consent to operate from UPPCB before it start its operation Water balance showing the potential of water reuse and fresh water consumption, evaporation loss should be submitted to UPPCB. UPPCB shall considering the finding of the water audit report issue necessary conditions in the consent operate. Use of treated water for irrigation purpose shall not be treated as a route to achieve zero discharge as there is no requirement on rainy days and in absence of any alternate option of utilisation, the unit will be discharging to the ambient environment, n case they are operational.	

9. M/s Dairy India Private Ltd.

1.	Name of the Unit and Address	**M/s Dairy India Private Ltd.** Gajraula, Amroha, UP
2.	Name of Contact person with designation Phone & Fax No/Email:	V K Arora, Head, Corporate Governance
3.	Installed Production Capacity:	125 KLD Milk Processing
4.	Water Consumption	180 KLD
5.	Source of water	Ground water CGWA – Permission Awaited
6.	Consent Status	For Water Valid up 31/12/2017 For Air valid up 31/12/2017

ETP Samples analysis results

Sampling locations	pH	TSS (mg/l)	COD (mg/l)	BOD (mg/l)
Inlet	4.35	1700	5344	1025
Outlet	8.40	37	142	**53**
General discharge standards (Consented)	-	100	-	30

Observations

The unit is not meeting the stipulated norms.

The unit claim to have zero liquid discharge, through ferti-irrigation approach. Use of treated water for irrigation purpose shall not be treated as a route to achieve zero discharge as there is no requirement on rainy days and in absence of any alternate option of utilisation, the unit will be discharging to the ambient environment, in case they are operational.

Recommendation

UPPCB shall assess the water balance report of the industry and make necessary modification in the consent condition to have appropriate and feasible condition with objective to conserve ground water and save uncalled for discharge of treated effluent.

10. M/s. Kaushambi Papers Mills Pvt. Ltd.

1	Name of the Unit and Address	**M/s. Kaushambi Papers Mills Pvt. Ltd.** Khasra No-138, naipura Kadar, The, Dhanaura, Gajraula, Amroha, UP
	Operational status	**The unit was found non-operational.** As informed by the unit, due to mechanical line burst in Pulp mill, the unit shut down around 2 AM on 25/4/2017 i.e. on the same day of inspection.
	 	
	Observations; 1. Waste was strewed around the campus, it is piled on the land claimed to be owned by the unit 2. Sludge is not properly stored and was found out side of the premisses also.	
	Recommendations: The unit shall manage the litter and scattered solid waste in proper and secured system. A proper action plan with time target for storage in a secured land fill /or any acceptable disposal mechanism to UPPCB shall be submitted by the units to UPPCB, before it is allowed to operate.	

Annexure -II

Units visited by the Officers of CPCB, UPPCB, MoWR on 01/05/2017

7. TEVA API Limited, Gajraula

1. **The Unit was operational** during visit.
2. The Unit has two bore well with water meter installed at a distance of 200m metre from the bore well.
3. The Unit has valid consent under Water/Air and HW Rules valid upto 31.12.2017.
4. **STP**. There are two STPs of 100 KLD (under stabilisation) and 60 KLD (operational). The STP is receiving wastewater from colony as well as domestic sources of industrial area. However, there is no flow measurement device at the inlet & outlet to measure the quantity of effluent generation. STP treated effluent is partially fed in gardening and partially mixed with ETP treated waste prior polishing RO for further treatment.
5. **ETP**. The ETP was operational and comprise of activated sludge process followed RO treatment and concentration and incineration of RO Reject through MEE/ MVRE and ATFD / Spray Dryer. ETP treated effluent (final RO permeate) is used as make up water for cooling tower. Sample of RO permeate was taken for analysis and result is awaited.
6. Dedicated energy meter was installed for the ETP electrical consumption, however the energy meter was installed far from ETP, therefore needs to install within the ETP.
7. During inspection no discharge was found outside the premises. The Unit should not provide multiple outlet for the storm water drain. The 3 outlets for storm water drain was regulated by valve and pumps which was found locked during visit. The Unit informed that the pumps are used to take first '10 minutes' storm water into the ETP. However, the records of operation of valves and pumps are no available.
8. The Unit has installed real-time OCEMS and connected to CPCB server and Calibrated by supplier/forbes Marshell. During visit it was operational.
9. Analytical results will be ready by 05.05.2017 and will be processed

8. M/s Umang Dairy Ltd, Gajraula

1. **The Unit was closed** during visit.
2. The Unit as consent valid upto 31.12.2017 under Water/Air and HW Rules.
3. The Unit has 3 bore wells for ground water abstraction and has installed water meter with logbooks.
4. Sewage treatment. The Unit has septic tank for the colony and industrial sewage wastewater.
5. ETP is based on ASP process followed by RO/UF treatment process.

6. ETP was operational for stabilising the biomass in aeration tank so that the plant can handle raw effluent at any time.

7. The RO Reject (262 KLD) is diluted with freshwater (500 KLD) and mixed effluent is used for planation/land application (10 acres). The unit shall discontinue the process of dilution of RO reject for disposal of RO reject.

8. CGWA permission under process and RO, CGWA has recommended for NOC.

9. Dedicated energy meter was installed for the ETP.

10. Flowmeter ware installed at the inlet & outlet of ETP.

11. Camera and flowmeter were installed at the ETP, however the Unit is not a ZLD plant, therefore needs to install real-time OCEMS for pH, BOD, COD, TSS parameters as per the CPCBs directions.

12. Closed.

9. M/s Coral News Print Ltd., Gajraula, UP

1. **The unit was Closed** at the time of inspection. As informed by industry the production was stopped since 29th April, 2017.

2. The Unit Consent under Water & Air Act expired on 31.12.2016, however has applied for the renewal.

3. No 'Authorization' has been obtained under Hazardous Waste Management Rule from UPPCB for disposal of ETP sludge & used oil etc.

4. The aeration tank of ETP was found operational to stabilize the biomass so that the plant can handle effluent at any time.

5. The Unit have only hill screen to recover the fiber reaching the ETP.

6. Sign of overflow from sludge drying bed observed, capacity of drying beds required to be increased.

7. The sludge press machine is not maintained properly and reflects that it is not being used for past one month or so.

8. No tertiary treatment (Sand filter/ multi-media filter/ACF) facility found in ETP. As per the Charter programme (pulp & paper) in Ganga basin States, industries are required to install tertiary treatment system.

9. The Unit has installed is 'V' shaped Notch (flow measurement) at the inlet of ETP & online effluent monitoring system (OCEMS) at final discharge line and connected to CPCB server.

10. The location of OCEMS & placement & one of its probe seems improper as the probe placed just above the bottom of a pit on the outlet drain. After the OCEMS also, the outlet drains receives water along with fly-ash from boiler area.

11. A Sample from treated water holding tank was taken for analysis and to assess the need for tertiary treatment and results is awaited.

12. The Unit needs to conduct ground water monitoring to know the impact of effluent through land application.

13. Closed.

Annexure –III

Color of the ground soil (where compost / spent was and soil was mixed) when mixed with Water

Compiled status of specific information as desired Hon'ble NGT of 10 industrial units

S. No.		1	2	3	4	5	6	7	8	9	10
Name of the Units/ Specific information required		M/s ASP Sealing Product Ltd., Gajraula	M/s. Jubiliant Agri & Consumer Products Ltd. (Fertilizer Unit) Bharatigram, Gajraula, District – Amroha,	M/s. Jubiliant Life Sciences Ltd. (Chemical Unit I), Bharatigram, Gajraula, District – Amroha,	M/s. Jubiliant Life Sciences Ltd. (Chemical Unit II). Bharatigram, Gajraula, District – Amroha,	M/s Jubiliant Life Sciences Ltd. (Distillery Unit), Bharatigram, Gajraula, District – Amroha,	M/s. Jubiliant Agri & Consumer Products Ltd. (Polymer unit) Bharatigram, Gajraula.	M/s Dairy India Private Ltd. Gajraula, Amroha,	M/s Insilco Ltd., A-5, UPSIDC Industrial Area, Gajraula,	M/s. Kaushambi Papers Mills Pvt. Ltd.Khasra No-138, naipura Kadar, Dhanaura, Gajraula,	M/s. Kamakshi Papers Pvt. Ltd. Gajraula
1	What is the source of water used by the industry and its quantity, availability, water meters etc.?	Ground water (24 KLD)	Ground Water Water meter installed (1400 KLD)	Ground Water Water meter installed (2300 KLD)	Ground Water Water meter installed (2600 KLD)	Ground Water Industrial- (3000 KLD)	Ground Water (250 KLD)	Ground water	Ground Water 4319 m3/day	Ground Water	Ground Water (500 KLD)
2	Whether the unit are ZLD, ZLD means they are not discharging any effluent, either on the land or in the waterbody or at any other place for that matter. They should be able to either not discharge a drop of liquid or recycle the same entirely without releasing thereto any effluent.	Not ZLD	ZLD unit, there is no ETP processing water is being recycled and reused (Non-operational)	Treated effluent being used for horticulture (Unit mentioned)	Treated effluent being used for horticulture (Unit mentioned)	ZLD unit Recycle and reused water	Not ZLD Recycle and reused water	Not ZLD Use for irrigation	Not ZLD unit Having Consent to discharge	Not ZLD (Operational)	Not ZLD Recycle and reused
3	Whether adequate ETPs have been provided and were found to be functional or not at the time of inspection, including its adequacy;	ETP Not available	Not ETP provided	Chemical ETP found operational (Unit 1 & Polymer)	Incilater	Not applicable	Chemical ETP found operational (Unit 1 & Polymer)	ETP operational	Yes ETP is adequate & found operational (Performance)	ETP found operational	ETP found operational

S. No.		1	2	3	4	5	6	7	8	9	10
Name of the Units/ Specific information required		M/s ASP Sealing Product Ltd., Gajraula	M/s. Jubiliant Agri & Consumer Products Ltd. (Fertilizer Unit) Bharatigram, Gajraula, District – Amroha,	M/s. Jubiliant Life Sciences Ltd. (Chemical Unit I), Bharatigram, Gajraula, District – Amroha,	M/s. Jubiliant Life Sciences Ltd. (Chemical Unit II). Bharatigram, Gajraula, District – Amroha,	M/s Jubiliant Life Sciences Ltd. (Distillery Unit), Bharatigram, Gajraula, District – Amroha,	M/s. Jubiliant Agri & Consumer Products Ltd. (Polymer unit) Bharatigram, Gajraula.	M/s Dairy India Private Ltd. Gajraula, Amroha,	M/s Insilco Ltd., A-5, UPSIDC Industrial Area, Gajraula,	M/s. Kaushambi Papers Mills Pvt. Ltd.Khasra No-138, naipura Kadar, Dhanaura, Gajraula,	M/s. Kamakshi Papers Pvt. Ltd. Gajraula
	performance; and its records thereof.										
4	The Committee would collect effluent samples at the inlet and outlet of the ETP and at the point of discharge, at the ultimate end.	From holding tank	Not applicable	Sample collected	Sample collected	Sample not Collected	Sample collected	Sample collected	Sample collected	Industry was closed at the time of inspection	Sample collected
5	Whether there is separate provision of Energy Meter for the ETP/ZLD.	Not aplicable	Not applicable	Yes	-	Yes		Yes	Yes		Yes
6	Whether there are online monitoring system installed and operative and if so connected to which authority, calibration/validation thereof;	Not installed	Common OCEMS installed	-	-	Yes, OCEMS installed	Yes, OCEMS installed	-	OCEMS Not installed	Yes, OCEMS installed	Yes, OCEMS installed
7	Whether water flow-meter have been installed.	yes	Yes	Installed at outlet of ETP	Installed at outlet of ETP	Yes	Yes		Provided V-Notch & Calibration chart	N/A	Yes

S. No.		1	2	3	4	5	6	7	8	9	10
Name of the Units/ Specific information required		M/s ASP Sealing Product Ltd., Gajraula	M/s. Jubiliant Agri & Consumer Products Ltd. (Fertilizer Unit) Bharatigram, Gajraula, District – Amroha,	M/s. Jubiliant Life Sciences Ltd. (Chemical Unit I), Bharatigram, Gajraula, District – Amroha,	M/s. Jubiliant Life Sciences Ltd. (Chemical Unit II). Bharatigram, Gajraula, District – Amroha,	M/s Jubiliant Life Sciences Ltd. (Distillery Unit), Bharatigram, Gajraula, District – Amroha,	M/s. Jubiliant Agri & Consumer Products Ltd. (Polymer unit) Bharatigram, Gajraula.	M/s Dairy India Private Ltd. Gajraula, Amroha,	M/s Insilco Ltd., A-5, UPSIDC Industrial Area, Gajraula,	M/s. Kaushambi Papers Mills Pvt. Ltd.Khasra No-138, naipura Kadar, Dhanaura, Gajraula,	M/s. Kamakshi Papers Pvt. Ltd. Gajraula
8	The inspection team shall also analyse the effluent quality at the end of the drain as well as at the point where Mahua starts.	Team could not visit due to time constraint									
9	The samples shall also be collected from the drain nearest to the industrial unit.	Sample was collected from the Bagad River									
10	The committee may also examine the Ambient Air Quality in that area.	Team could not visit due to time constraint									
11	Whether any of the industries have a by-pass mechanism provided in the factory, even if it has been now closed or groundwater injection system.	Could not found									By-pass arrangement available (CPCB issued show cause notice on 13.01.2017)
12	The inspection shall also verify the agriculture areas used for disposal of effluent of the industries.	Visited & sample collected									

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INSPECTION REPORT OF M/S UMANG DAIRIES LIMITED, GAJRAULA, UP ON MAY 01, 2017 BY CPCB, NMCG AND UPPCB OFFICIALS UNDER HON'BLE NGT ORDER.

1.0 INTRODUCTION:

Hon'ble NGT vide its order dated 24.04.2017 (M.C Mehta Vs Union of India) constituted a special high power committee consisting MS, CPCB, Mr. Sandeep Kumar, NMCG and Mr. R.N. Jindal, Director, MoEFCC and MS, UPPCB. As per the Hon'ble NGT order the 13 Units in Gajraula has to inspected. M/s Umang Dairies Ltd., Gajraula is one of industry located in Gajraula.

M/s Umang Dairies Limited, Gajraula (*hereinafter referred as the Unit*) manufactures Milk, Milk powder, Ghee, and Milk pouch having consented capacity 08 lakh litr/day.

The joint inspection team comprising CPCB, NMCG, and UPPCB official conducted an inspection of the Unit on 01.05.2017. The Unit was found to be closed during inspection, however aeration tank was operation for stabilization.

The information collected from the representative of the Industry and observations of the inspecting team are as follows:

A. General Information

1.	Name of the unit and Address	M/s UMANG DAIRIES LIMITED, GAJRAULA, UP
2.	Name of the Contact person Designation Contact Email-	Mr. SURENDRA PAL DGM (QA) Contact no : 09719120506 Email : surendrapal@umangdairy.com
3.	Sector	Dairy Industry
4.	Products	Milk, Milk powder, Ghee, and Milk pouch
5.	Production	The average production during Jan-March 2017 is annexed at Annexure-1
6.	Consented Capacity	Raw Milk processing capacity - 08 lakh litr/day SMP-25 TPD, Whitener- 25 TPD, Ghee-18 TPD and Polly Pack Milk- 05 Lakh Litr/day.
7.	Status of Unit	Non-operational.

B. Status of Water Pollution and its Control:

8.	Water Source Water Consumption Industrial Cooling Domestic Boiler	03 Bore wells with water meter installed m^3/day 956 256 250 -
9.	Waste Water Generation Industrial Domestic	 980 m^3/day --

10.	Details of ETP ETP Description	ETP comprises of Equalization tank, Primary Clarifier, Dissolved air floatation (DAF), Aeration tank; Secondary Clarifier, Sludge drying beds and Sand filter, RO system, Ultra Filtration system. The reject of RO is mixed with freshwater and disposed of in land application. The RO permeate is used in process, floor cleaning, washing, etc.
11.	OCEMS installation & Connectivity	Camera and flow meter installed at the secondary clarifier outlet. The Unit is not a ZLD plant as they dispose off the effluent through land application. Therefore, needs to install OCEMS for pH, BOD, COD, TSS and flow.
12.	Point of Ultimate Disposal	Treated effluent is used for land application and some part in process and Floor cleaning, washing.
13.	Status of Consent under the Water Act- 1974	Valid up to 31.12.2017

Part C: Air pollution:

14.	Sources of Air Pollution	02 Boilers
15.	Type of Fuel used	Fuel- Agro fuel
16.	APCD /Air Pollution Control Device	Dust collector and Bag filter (as informed by then Unit)
17.	Consent status	Valid up to 31.12.2017

2. OBSERVATIONS:

1. The Unit was closed during visit.
2. The Unit as consent valid upto 31.12.2017 under Water/Air and HW Rules.
3. The Unit has 3 bore wells for ground water abstraction and has installed water meter with logbooks.
4. Sewage treatment. The Unit has septic tank for the colony and industrial sewage wastewater.
5. ETP is based on ASP process followed by Sand filter and RO/UF treatment process.
6. ETP was operational for stabilising the biomass in aeration tank so that the plant can handle raw effluent at any time.
7. The RO Reject (262 KLD) is diluted with freshwater (500 KLD) and mixed effluent is used for planation/land application (10 acres). The unit shall discontinue the process of dilution of RO reject with freshwater for disposal of RO reject.
8. CGWA permission under process and RO, CGWA has recommended for NOC.
9. Dedicated energy meter was installed for the ETP.
10. Flowmeter ware installed at the inlet & outlet of ETP.

11. Camera and flowmeter were installed at the ETP, however the Unit is not a ZLD plant, as the treated effluent is used / disposed in land /irrigation purpose. Therefore, needs to install real-time OCEMS for pH, BOD, COD, TSS & flow parameters.

12. Unit was closed during visit.

3.0 RECOMMENDATION:

1. The Unit shall discontinue the process of dilution of RO reject with fresh water for disposal of RO reject on land application and should dispose of RO reject in a scientific manner.

2. The Unit should install real-time online effluent monitoring system (OCEMS) for the parameter pH, BOD, COD, TSS and flow.

4.0 DATE OF INSPECTION: MAY 01, 2017

5.0 INSPECTION TEAM:

Name designation & signature of inspecting officer(s)			
	Name	Designation and Organization	Signature
A	Sh. N.C. Durgapal	Scientist 'D'	
B	Sh. Kamlesh Singh	Scientist 'D'	
C	Sh. Vivek Roy	Regional Officer, UPPCB, Bijnore	
D	Sh.Rajeev Kumar Srivastava	ASO, UPPCB, Bijnore	
E	Sh. Neeraj Gahlawat	Project Officer, NMCG	

Umang Diary Pvt Ltd. (ETP) – Unit was closed	
Aeration Tank	RO treatment
	
DAF	UASB - Anaerobic treatment
	

INSPECTION REPORT OF M/S CORAL NEWS PRINT, GAJRAULA (UP)

01	Name of the Industry	M/S CORAL NEWS PRINT, GAJRAULA (UP)
02	Date of Inspection	01.05.2017
03	Name of Contact person with designation Phone & Fax No/Email:	Shri. PPS Chauhan, Director 9311208775
04	Operational Status	Closed (since 29.04.2017)
05	Status of consents	Consent expired on 31.12.2016 (Water/Air Act) For Renewal- Application submitted on 28.11.2016 (through Hard copy) & 18.02.2017 (through online mode)
06	Product	Consented capacity Newsprint Paper- 20 TPD
07	Raw material used	Waste paper
08	Source of Water	Ground Water
09	No of Bore well ,if source is ground water	One (with calibrated water meter and hour meter)
10	Permission of CGWA (Centre Ground Water Authority)	No CGWA permission
11	Status of water cess payment	Rs. 9.0 lakh to be settled towards cess
12	Quantity of treated effluent	--
13	Disposal of treated effluent	Recycled/Reuse and land application
14	Disposal of ETP Sludge	To other agency in the form of pressed board
15	Status of Energy meter at ETP/STP	Installed
16	ETP units	Equalization tank, primary clarifier, aeration tank, secondary clarifier, treated effluent sump and sludge drying beds.
17	Treatment of wastewater from toilet etc. (STP)	Septic tank

16 Site of effluent treatment plant (ETP)- sample collection and analysis results:

A. General Physico-chemical parameters of ETP – Unit was closed

Parameters	pH	TSS mg/l	BOD mg/l	COD mg/l	TDS mg/l	SAR
Standards	*5.5-9.0*	--	*30*	--	--	*26*
Treated effluent sump/tank	7.79	41	58	194	984	1.96

The treated effluent is stored in a holding tank at the outlet. During visit ETP was operational and holding tank was receiving treated effluent from secondary clarifier. However, no discharge was found outside the premises / for land application. The Unit closed industry on 29.04.2017, in the absence of fresh effluent, the treated effluent (from holding tank) was being recycled back into the ETP. The actual performance of the ETP could be ascertain while the Unit is in operation.

17 Observations:

1. The Unit was Closed at the time of inspection. As informed by industry the production was stopped since 29th April, 2017.
2. The Unit Consent under Water & Air Act expired on 31.12.2016, however has applied for the renewal.
3. No '***Authorization'*** has been obtained under Hazardous Waste Management Rule from UPPCB for disposal of ETP sludge & used oil etc.
4. The aeration tank of ETP was found operational to stabilize the biomass so that the

plant can handle effluent at any time.

5. The Unit have only hill screen to recover the fibre reaching the ETP.

6. Sign of overflow from sludge drying bed observed, capacity of drying beds required to be increased.

7. The sludge press machine is not maintained properly and reflects that it is not being used for past one month or so. The sludge management system for primary and secondary clarifier needs to be augmented.

8. No tertiary treatment (Sand filter/ multi-media filter/ACF) facility found in ETP. As per the Charter programme (pulp & paper) in Ganga basin States, industries are required to install tertiary treatment system.

9. The Unit has installed is 'V' shaped Notch (flow measurement) at the inlet of ETP & online effluent monitoring system (OCEMS) at final discharge line and connected to CPCB server.

10. The position/location of OCEMS needs to be relocated. As the probe/sensor of the OCEMS is located in a pit constructed in the outlet drain which will not give the real-time monitoring data. The outlet effluent channel receives water along with fly-ash from boiler area/section.

11. *A Sample from final treated water holding tank was taken for analysis and to assess the need for tertiary treatment*. No discharge was found during inspection, however holding tank is connected to discharge channel. The Unit informed a part of treated effluent is used for land application.

12. The sample analysis of water collected from final treated water holding tank showed pH-7.79, BOD-58 mg/l (*norms-30 mg/l*); TSS-41 mg/l; COD-194 mg/l; SAR-1.96 (*norms-26*). In the absence of fresh effluent (due to closing of industry), ETP treated effluent (from holding tank) was being recycled back into the ETP so as to maintain the MLSS concentration and to stabilise the ETP. The actual performance of the ETP could be ascertain when the Unit is in operation.

13. The Unit needs to install tertiary treatment so as to meet the discharge effluent standard.

14. The Unit needs to conduct ground water monitoring to know the impact of treated effluent through land application.

15. Bagad River. The Bagad River is close to this industry (approx. 1 Km). The informed that no treated effluent is being discharged into the Bagad River and treated effluent used in process and for land application.

16. A sample from Bagad River (downstream, 150 meter down from NH-24) was collected during the visit on 01.05.2017 and sample analysis showed pH-7.13, BOD-193 mg/l; COD-557 mg/l; TSS-232 mg/l and SAR-48.06. No considerable flow was observed in Bagad River during the visit. Sludge was observed in the River (downstream) and which requires to be removed. High SAR value indicates, water not suitable for irrigation purpose. The SAR discharge norms is fixed at 26 for various industries (like pulp & paper Unit, Silicon dioxide making Unit etc).

Recommendation:

1. The Unit should install tertiary treatment system at the ETP.
2. The Unit should install adequate sludge handling and disposal system for the ETP sludge (primary and secondary sludge).
3. The Unit should obtain Authorisation under Hazardous Waste Rules from UPPCB.
4. The fly ash from the boiler section needs to be disposed of in a scientific manner.
5. The real-time effluent monitoring system (OCEMS) should be placed/located in the discharge line in such a away so as to get the real-time monitoring data.

18	Photographs taken during inspection- Unit was Closed during visit	
		
	Raw material storage Yard	Pulper
		
	Sludge drying beds	Sign of overflow from Sludge drying beds
		
	Sludge press machine	V-notch at Inlet – for flow
		
	Treated effluent sump	Aeration tank - sludge settling /sludge volume observations

		
	Fly-ash in the outlet drain	Bagad River

19	Name designation & signature of inspecting officer(s)			
		Name	Designation and Organisation	Signature
	A	Sh. N.C. Durgapal	Scientist 'D'	
	B	Sh. Kamlesh Singh	Scientist 'D'	
	C	Sh. Vivek Roy	Regional Officer, UPPCB, Bijnore	
	D	Sh.Rajeev Kumar Srivastava	ASO, UPPCB, Bijnore	
	E	Sh. Neeraj Gahlawat	Project Officer, NMCG	

INSPECTION REPORT OF M/S TEVA API INDIA PVT. LTD., GAJRAULA (UP)

01	Industry Name	M/S TEVA API INDIA PVT. LTD., GAJRAULA (UP)
02	Date of Inspection	01.05.2017
03	Name of Contact person with designation Phone & Fax No/Email:	Asif Ali Khan, Senior Manager (EHS) 08395876022 Asif.khan@teva.co.in
04	Operational status	In operation during visit
05	Status of consents	Valid till 31.12.2017
06	Product	Bulk drugs and intermediates – 33105 Kg. /month (average Oct., 2016- March, 2017)
07	Raw material used	Sodium hydroxide, acetone, toluene, Hydrochloric acid etc.
08	Source of Water	Ground Water
09	No of Bore well ,if source is ground water	Two (with calibrated water meter)
10	Permission of CGWA (Centre Ground Water Authority)	No (Applied on 29.03.2017)
11	Status of water cess payment	Water cess return file till March, 2017
12	Quantity of treated effluent	Feeding in ETP 279 KLD (Average January, 2017- March, 2017)
13	Disposal of treated effluent	Recycled/land application
14	Disposal of ETP sludge	TSDF Kanpur
15	Status of Energy meter at ETP/STP	Installed
16	ETP units	Oil and grease trap, equalization tank, neutralization tank, flush mixer, clarifloculator, bio reactor I, secondary clarifier I, bio reactor II, secondary clarifier II, RO,MRVE, MEE, ATFD, spray dryer, Incinerator, sludge drying beds.
17	Treatment of wastewater from canteen toilet etc.	STP

16 Site of effluent sample collection and analysis results:

General Physico-chemical parameters

Parameters	pH	TSS mg/l	BOD mg/l	COD mg/l	TDS mg/l	Oil & Grease	SAR	NO3-N
ETP								
Standards (treated effluent)	*6-8.5*	*100*	*30*	*250*	--	*10*		
Inlet of ETP	6.63	47	519	1273	312	06	--	
Outlet of ETP	8.21	BDL	04	11	160	06	--	
STP								
Standards (treated sewage); mg/l	--	*100*	*30*	--	--	--	--	--
Inlet of STP	8.45	22	194	436	-		--	1.74
Outlet of STP	7.50	72	88	195	--		3.12	0.99

17	Observations: 1. The Unit was operational during visit. 2. The Unit has two bore well however the water meter installed at a distance of 200m metre from the bore well. 3. The Unit has valid consent under Water/Air and HW Rules valid upto 31.12.2017. 4. STP: There are two STPs of 100 KLD (under stabilisation) and 70 KLD (operational). The STP is receiving wastewater from colony as well as domestic sources of industrial area. However, there is no flow measurement device at the inlet to measure the quantity of sewage generation. Treated sewage is partially fed in gardening and partially mixed with ETP treated waste prior polishing RO for further treatment. However, in the absence of the meter it is not possible to find out the ratio of treated sewage used in gardening and mixed with treated effluent. 5. The final STP treated effluent showed pH-7.50, BOD-88 mg/l (*UPPCB norms-30 mg/l*), COD-195 mg/l; TSS-72 mg/l (*UPPCB norm-100 mg/l*) and SAR-3.12 mg/l. A part of the STP treated effluent is used for gardening, however the land application of partially treated effluent should be discontinued and industry should meet the BOD standards prescribed for sewage discharge by UPPCB. 6. ETP. The ETP was operational and comprise of activated sludge process followed RO treatment and concentration and incineration of RO Reject through MEE/ MVRE and ATFD / Spray Dryer. ETP treated effluent (final RO permeate) is used as make up water for cooling tower. 7. The final ETP treated effluent (RO permeate) showed compliance with the effluent discharge standards prescribed under E(P)Rules, 1986. 8. Dedicated energy meter was installed for the ETP electrical consumption, however the energy meter was installed far from ETP, therefore needs to install within the ETP. 9. During inspection no discharge was found outside the premises. The Unit should not provide multiple outlet for the storm water drain. The 3 outlets for storm water drain was regulated by valve and pumps which was found locked during visit. The Unit informed that the pumps are used to take first '10 minutes' storm water into the ETP. However, the records of operation of valves and pumps are no available. 10. Industry should use colour coding to differentiate between the various pipelines used for water, wastewater and partially treated water. 11. The Unit has installed real-time OCEMS and connected to CPCB server and Calibrated by supplier/forbes Marshell. During visit it was operational. Recommendation: 1. The land application of partially treated sewage effluent (STP) should be discontinued and industry should meet the BOD standards prescribed for STP discharge by UPPCB. 2. The Unit should not provide multiple outlet for the storm water drain and provide only one designated outlet point for storm water which should be closed all the time and operational only during rainy season. 3. The Unit should provide colour coding of the various pipelines used for freshwater, wastewater, back water, etc.. 4. The Unit should install water meter at the borewell itself and not away from the borewell.

18	Photographs taken during inspection	
		
	Sealed Effluent samples	Equalization tank
		
	RO PLANT	Strom water drain
		
	Water meter installed in abstracted water line	Filter press

19	Name designation & signature of inspecting officer(s)			
		Name	Designation and Organisation	Signature
	A	Sh. N.C. Durgapal	Scientist 'D'	
	B	Sh. Kamlesh Singh	Scientist 'D'	
	C	Sh. Vivek Roy	Regional Officer, UPPCB, Bijnore	
	D	Sh.Rajeev Kumar Srivastava	ASO, UPPCB, Bijnore	
	E	Sh. Neeraj Gahlawat	Project Officer, NMCG	

Bagad River

A sample from Bagad River (downstream, 150 meter down from NH-24) was collected during the visit on 01.05.2017 and sample analysis showed pH-7.13, BOD-193 mg/l; COD-557 mg/l; TSS-232 mg/l and SAR-48.06. No considerable flow was observed in Bagad River during the visit. Sludge was observed in the River (downstream) and which requires to be removed. High SAR value indicates, water not suitable for irrigation purpose. The SAR discharge norms is fixed at 26 for various industries (like pulp & paper Unit, Silicon dioxide making Unit etc).

Bagad River