

**IN THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI.
O.A. No. 515/2022**

IN THE MATTER OF: -

Dharamvir

.....Applicant

Versus

State of Haryana & Anr.

.....Respondent

**Progress Report in compliance of Hon'ble NGT order dated 14.03.2023 & dated
18.07.2023 in O.A No. 515/2022**

INDEX

Sr. No	Particulars	Page
1	Progress Report in compliance of Hon'ble NGT order dated 14.03.2023 & dated 18.07.2023 in O.A No. 515/2022.	1-34
2	<u>ANNEXURE-A</u> : Minutes of meeting held on dated 04.10.2023 of Haryana.	35-46
3	<u>ANNEXURE-B</u> : Copy of letter dated 04.10.2023 of Executive Engineer, Jal Shakti Vibhag Nahan having mathematical model study for flood protection measures of River Markanda from Rukhri to Kala Amb.	47-60
4	<u>ANNEXURE-C</u> : Copy of Letter of DRO, Sirmaur at Nahan vide letter dated 10.10.2023 regarding no encroachment observed in River Markanda in Himachal Pradesh.	61-62
5	<u>ANNEXURE-D(Colly)</u> : Status of discharge of untreated domestic sewage or industrial effluent with locations of Sub drains/ nallah/Rivulets of Himachal and Haryana.	63-65
6	<u>ANNEXURE-E</u> : Status of Management of sewage generated from towns of Districts of Panchkula, Ambala, Kurukshetra and Kaithal in Haryana.	66
7	<u>ANNEXURE-F</u> : Copy of Xen, Jal Shakti Vibhag, Nahan letter dated 13.10.2023	67-68
8	<u>ANNEXURE-G</u> : Copy of Director, KIDC, Kala Amb letter dated 25.09.2023	69
9	<u>ANNEXURE-H</u> : List of water polluting industries along with their final disposal and their compliance status of Himachal Pradesh	70-73
10	<u>ANNEXURE-I</u> : Latest compliance status of all STPs and their compliance status existing in 4 no. of districts Haryana	74-75
11	<u>ANNEXURE-J</u> : List of water polluting industries along with their final disposal and their compliance status of Haryana	76-79
12	<u>ANNEXURE-K</u> : Site Photographs shared by CPCB of various locations	80-83

FILED BY: -

Joint Committee Constituted by
Hon'ble NGT vide order dated 14.03.2023

Place: Chandigarh
Dated: 17.10.2023

PAWAN SHARMA
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PAWAN SHARMA
Date: 2023.10.17
19:05:08 +05'30'

Regional Officer, Sirmaur,
HPSPCB

AJAY SINGH
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by AJAY SINGH
Date: 2023.10.17
19:02:06 +05'30'

Regional Officer, Ambala,
HSPCB

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**Progress Report in compliance of Hon'ble NGT order dated 14.03.2023
& dated 18.07.2023 in O.A No. 515/2022****A. Background:**

Hon'ble National Green Tribunal while considering the reply/ response of the respondents submitted on various dates found its appropriate to constitute **another Joint Committee** vide its order dated 14.03.2023 comprising of the representatives of the following central agencies including various departments from both of the States :-

1. The Ministry of Environment, Forest and Climate Change, New Delhi.
2. The Central Pollution Control Board, New Delhi.
3. Additional Chief Secretary/Principal Secretary, Department of Jal Shakti
4. Additional Chief Secretary/Principal Secretary, Department of Environment
5. Additional Chief Secretary/Principal Secretary, Department of Industry
6. State Pollution Control Board of Himachal Pradesh & Haryana.
7. Deputy Commissioner, Nahan (Himachal Pradesh) and Ambala & Kurukshetra (Haryana)

Further, following issues were directed to redress and to submit its report within **03 months**:

1. *Regarding notification of the Flood Plain Zone (FPZ) of River Markanda available if any*
2. *Encroachments made if any and action taken for removal thereof*
3. *Discharge of untreated domestic sewage or industrial effluent in to River Markanda*
4. *Operational efficacy of STPs/ETPs/CETPs already setup*
5. *Proposals for setting up of new STPs/ETPs/CETPs if any*
6. *Dredging of the River/Drain required if any.*
7. *Rejuvenation/remedial measures required if any.*
8. *The Joint Committee shall also arrange collection of samples of water from different strategic locations (outfall of STPs/ETPs/CETPs) and at the interval of 1 KM of drain/River and analysis of the same with respect to all relevant parameters including presence of heavy metals.*

The case was further **adjourned to 18.07.2023**.

Thereafter in compliance of Hon'ble NGT order dated 14.03.2023, the meeting of joint committee was held on dated 12.06.2023, the copy of MOM already supplied with the last joint status report submitted before Hon'ble Tribunal on dated 17.07.2023 wherein time extension for 06 Months was sought to submit its final report based upon the suggestions/decisions of Joint Committee.

While considering the report during hearing conducted on Dated 18.07.2023, the Hon'ble NGT directed the state PCBs of HP & Haryana vide its order dated 18.07.2023 (copy enclosed) that:-

*"To Clearly indicate quantity of sewage and industrial effluents being discharged into river Markanda directly or indirectly through drains and take necessary steps and to ensure that there shall not be untreated discharge of waste water (sewage and industrial) into the water body or river and covering earlier observations on flood plain zone and encroachments and submit a report **within 03 months.**"*

The case was further adjourned to 18.10.2023.

B. Pointwise status of information sought by Hon'ble NGT from Himachal Pradesh State Pollution Control Board (HPSPCB) and Haryana State Pollution Control Board (HSPCB) vide orders dated 14.03.2023 & dated 18.07.2023:-

A meeting was convened amongst the Administrative secretaries/HODs of the stakeholder departments of Haryana to obtain the information pertaining to their department under the Chairmanship of Chairman, HSPCB on dated 04.10.2023 along with appraisal of the issue before the house and type of information required on individual basis from the concerned departments, so that compiled information may be submitted to Hon'ble NGT. The copy of minutes of meeting held on dated 04.10.2023 is enclosed as **Annexure-A**.

Further after receipt of requisite information from the stakeholder departments of both the States against the point wise information sought by Hon'ble National green Tribunal vide its orders dated 14.03.2023 & dated 18.07.2023 and as provided by both HPSPCB and HSPCB is submitted, as follows:

1. Notification of the Flood Plain Zone (FPZ) of River Markanda:-

I. Status of Himachal Pradesh:-

The total length of river Markanda from origin point in Himachal Pradesh to exit point at Kala Amb in Himachal Pradesh is approximately 24.00 km. The Executive Engineer, Jal Shakti Vibhag Nahan has provided mathematical model study for flood protection measures of River Markanda from Rukhri to Kala Amb vide his letter dated 04.10.2023 which is annexed as **Annexure-B**. Further the River Markanda is not notified under Flood Plain Zone (FPZ).

II. Status of Haryana:-

The total length of river Markanda from entry point in Haryana State to final merger into river Ghaggar at Kaithal Haryana is approximate 125.00 km. The length of marginal bund on both sides of river is approximate 116.00 km. Moreover, the river Markanda is not notified under flood Plain Zone (FPZ). All the rivers flowing through the land of private owners.

2. Encroachments made, if any and action taken for removal thereof

I. Status of Himachal Pradesh:-

As regard to issue of encroachment around River Markanda, there is no encroachment observed as per information received from District Revenue Officer, Sirmaur at Nahan vide letter no. SIR-SK (1-B)/MM/Encr/2022-1585, dated 10.10.2023. The copy of letter is annexed as **Annexure-C**.

II. Status of Haryana:-

No encroachment made in the creek of River Markanda and its tributary from entry point in Haryana State to final merger into River Ghaggar at Kaithal, Haryana.

3. Discharge of untreated domestic sewage or industrial effluent in to River Markanda or its tributaries

I. Status of Himachal Pradesh, as provided by HPSPCB:-

1.) Estimation of Sewage Generation from the towns existing in catchment of River Markanda or its Tributaries

Domestic Water Consumption of Kala Amb Area:

As per Census 2011, the population of Kala Amb & Moginand area was 6,695 and the present population is 7,280. At present, all the rural water supply schemes under Jal Shakti Vibhag (JSV) division, Nahan have been designed on the water requirement of 70 Liters per capita per day demand (norm set for rural water supply system). Therefore, the total domestic water consumption of Kala Amb and Moginand area comes out around 510 KLD. Further, considering the floating population of about 10,000 water requirement works out to be 450 KLD at the rate of 45 Liters per capita for the workers etc.

Sewage and Sullage Generation of Kala Amb area:

As per Census 2011, the population of Kala Amb & Moginand area in 2011 was 6,695 and the present population of the area is 7,280. The projected population after 20 years will be 10,010 considering the present growth rate of area. For this population sewage load calculations as per water demand of 135 litres per capita will be 1,081 KLD. In addition to this considering a floating population of around 10,000 in Kala Amb, sewage generation as per water demand of 45 litres per capita will be around 360 KLD (Source: IS 1172:1993 Indian Standard Code of Basic Requirements for basic supply, drainage and sanitation)

2.) Status of discharge of untreated domestic sewage or industrial effluent in to River Markanda or its tributaries

In Kala Amb area of Himachal Pradesh, waste water is being generated from commercial and domestic activities. For the treatment of domestic sewage, septic tanks/soak pits have been provided by individual households. To cater this untreated domestic sewage/sullage from villages

i.e. Moginand, Rampur Jattan, Mainthapal, Ogli, Johron, Khairi and Trilokpur, the State Government of H.P. has already established two STPs (STP Trilokpur and CETP-cum-STP Kala Amb) and same could not be made operational till date due to damages caused by recent flash floods in Himachal Pradesh. Further, there are numerous road side dhabas/butcher shops/sabziwalas located on both sides of Kala Amb-Trilokpur Road of Himachal Pradesh and their solid/liquid waste is flowing into roadside drains and further merging into Jattanwala Nallah. Water stagnation and decaying biodegradable waste is also one of the factors in affecting the water quality of River Markanda. In addition to above, Block Development Officer, Nahan has submitted detail of management of black water of 07 number of Gram Panchayats vide letter no. BBM/NGT/2023-3354, dated 05.10.2023.

There are total 03 no. of drains and 01 no. of Rivulet identified by State of Himachal in the District Sirmaur which are carrying untreated effluent and further merging in to River Markanda directly (*covering from origin point of River Markanda in Himachal Pradesh to its exit at Kala Amb, HP and Haryana Border*) with details of locations of such sub drains/nallah/Rivulets is given at **Annexure-D (Colly)**.

Hon'ble NGT in O.A. No, 673/2018 has directed for rejuvenation of 07 polluted river stretches in Himachal Pradesh including River Markanda and prepare the action plan. HPSPCB has already prepared action plan for rejuvenation of River Markanda and progress report is monitored at State level by State Surveillance Task Force chaired by Worthy Chief Secretary, Govt. of H.P. and at district level by District Level Surveillance Task Force chaired by Deputy Commissioner, Sirmaur on monthly basis. After quantification along with action plan for tapping of these drains is already proposed to be treated in CETP-cum-STP Kala Amb provided by M/s Kala Amb Infrastructure Development Company and Jal Shakti Vibhag Nahan .

II. Status of Haryana, as provided by HSPCB:-

1.) Estimation of Sewage Generation from the towns existing in catchment of River Markanda or its Tributaries

Total 145 MLD of sewage is being generated from different 12 towns of 04 Districts at Panchkula, Ambala, Kurukshetra and Kaithal of Haryana. There are total 40 No. of STPs available of installed treatment capacity of 264 MLD to cater out the need of treatment in these towns. The detailed status of Management of sewage generated from these towns of Districts of Panchkula, Ambala, Kurukshetra and Kaithal is enclosed as **Annexure-E**.

2.) Status of discharge of untreated domestic sewage or industrial effluent in to River Markanda or its tributaries

There are total 38 no. of drains identified by Irrigation & Water Resources Department (Jal Shakti) from 04 No. of Districts Panchkula, Ambala, Kurukshetra and Kaithal of Haryana carrying untreated effluent and further merging in to River Markanda or its Tributaries directly or indirectly of the respective District (*covering from entry point of River Markanda in Haryana at Kala Amb to its final merger into River Ghaggar at Kaithal, Haryana*) with details of locations of such sub drains/nallah/Rivulets is given at **Annexure-D (Colly)** covering for both of the States. The quantification alongwith the preparation of action plan for tapping of these drains is yet to be done by the departments concerned.

4. Operational efficacy of STPs/ETPs/CETPs already setup

I. Status of Himachal Pradesh, as provided by HPSPCB:-

Operational efficacy of STP/CETPs already setup by Jal Shakti Vibhag and Department of Industries is tabulated below:

STP		CETP-cum-STP	
Capacity (in MLD)	Operational Status	Capacity (in MLD)	Operation Status
1.5 MLD	STP is not functional yet and description given below at point no. i.	2.5 MLD (0.8 MLD industrial effluent + 1.7 MLD domestic effluent)	STP is not functional yet and description given below at point no. ii.

i) Status of STPs:

For the sewage management, Jal Shakti Vibhag, Nahan has installed Sewage Treatment Plant of capacity 1.5 MLD for Johron, Khairi and Trilokpur area of Kala Amb and primary treatment for sewage of Moginand, Rampur Jattan, Mainthapaland Ogli area of Kala Amb in CETP-cum-STP of capacity 2.5 MLD (1.7 MLD domestic effluent). The total pipeline to be laid for STP Trilokpur is 8.5kms out of which work of laying pipeline of approx. 7.9 km was completed. Work of laying total sewerage pipeline of 21.645 kms for Moginand, Rampur Jattan, Mainthapal and Ogli in Kala Amb out of which work of 20.500 kms was completed. As per Jal Shakti Vibhag letter no. JSDN-DB-(RTWQMS)-2023-10684-85, dated 13.10.2023, vide which they have intimated that the sewer network of STP Kala Amb and STP Trilokpur has suffered major damages due to heavy rainfall causing flash floods in this monsoon season. The copy of letter is already annexed in **Annexure-F**.

ii) Status of CETPs:

The Special Purpose Vehicle (SPV) M/s Kala Amb Industrial Development Company (KIDC) has proposed to establish CETP-cum-

STP Kala Amb of capacity 5 MLD in two phases out of which Common Effluent Treatment Plant (CETP) of capacity 2.5 MLD is already established for first phase (0.8 MLD industrial effluent and 1.7 MLD domestic effluent). H.P. State Pollution Control Board has already issued Consent to operate to run the CETP however same could not be operated due to no household/commercial domestic effluent load. HPSPCB has already notified inlet standards of CETP Kala Amb. A letter in this context has already been written by Kala Amb Infrastructure Development Company (KIDC) vide letter no. KIDC/-JSV-03, dated 25.09.2023 to the Executive Engineer, Jal Shakti Vibhag Nahan. The copy of letter is already annexed in **Annexure-G**.

iii) Status of ETPs:

The Kala Amb industrial area can be divided into following zones as per drainage pattern:

- a) Industries located on the Right and left bank of River Markanda from Moginand area to Kala Amb barrier*
- b) Industries located in Jattanwala Drain catchment*
- c) Industries located in Khairi area*
- d) Industries located on Kala Amb-Sadhaura Road*

There are total 97 nos. of water polluting industries located in Kala Amb area of Himachal Pradesh. These industries have provided captive Effluent Treatment Plants. In addition to above, 08 nos. of industries have installed captive STPs wherever the manpower is more than 150 nos. The treatment technology provided ranges from primary treatment system i.e. Chemical treatment, precipitation/settling followed by dual media carbon filters, activated sludge process followed by dual media carbon filters, industries have also provided RO systems and evaporators for ensuring zero liquid discharge.

M/s Ruchira Papers Ltd. is the only industry in Kala Amb that falls under 17 categories of highly polluting industries and has installed their captive ETP of capacity 11 MLD. The unit has obtained consent from State Board for discharge of treated effluent quantity of 4.012 MLD into drain. The unit has installed Real Time Online Continuous Water Quality Monitoring Station and Flow meter at the final outlet of ETP. The results of treated effluent are being displayed on the CPCB and HPSPCB server on real time basis.

All the 105 nos. of industries have obtained requisite Consent to Operate of the State Board under Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981. All the 105 nos. of industries have installed effluent treatment plants or Sewage Treatment Plants in their respective industries. The list of water polluting industries along with their final disposal and their compliance status is annexed as **Annexure-H**.

II. Status of Haryana, as provided by HSPCB:-**i) Status of STPs of Haryana:**

There are total 40 no. of Sewerage Treatment Plants has already been installed in 04 of Districts i.e Panchkula, Ambala, Kurukshetra and Kaithal of Haryana with having total 264 MLD of installed capacity. Out of which 29 no. of STPs are complying and 11 no. of STPs are non-complying as per latest monitoring reports w.r.t stringent discharge standards fixed by HSPCB vide its letter dated 02.07.2020 wherein parameters fixed as BOD-10 mg/L, Total Suspended Solid-20 mg/L, COD-50 mg/L and Fecal Coliform less than 100 MPN/100 ml. The Haryana State has fixed stringent norms for discharge of sewage in compliance of the directions issued by the Hon'ble NGT vide its order dated 15.06.2020 in OA no. 138 of 2016. The latest compliance status of all STPs in aforesaid 4 no. of districts in Haryana is enclosed as **Annexure-I**. The abstract of these STPs is given as under:-

District	Existing STPs		Under Construction STPs	
	No	Capacity (MLD)	No	Capacity (MLD)
Ambala	14	51	4 (ULBD)	44
Kurukshetra	4	59.5	0	0
Panchkula	15	97.25	0	0
Kaithal	7	56	0	0
Total	40	264 MLD	4	44

- ❖ **Status of up gradation of 11 no of Non-complying STPs :-** These 11 no. of existing STPs of 46.25 MLD capacity are under up gradation to meet out with the aforesaid stringent effluent discharge standards. The timelines to complete the work of up gradation of these STPs are as under:

Sr. No.	Name of the district	Name of the town/ city	Deptt.	Existing STP and Capacity (MLD)	Likely date of achieving standards
1	Ambala	Naya Gaon, Unit-I, Ambala City	PHED	3	31.12.2023
2	Ambala	Naya gaon, Unit-II, Ambala City	PHED	3.25	31.12.2023
3	Ambala	Baldev Nagar, Unit-I, Ambala City	PHED	5	31.01.2024
4	Ambala	Baldev Nagar, Unit-II, Ambala City	PHED	3.25	31.12.2023
5	Ambala	Moti Nagar, Unit-I, Ambala City	PHED	5	31.12.2023
6	Ambala	Moti Nagar, Unit-II, Ambala City	PHED	5	31.12.2023
7	Ambala	Nasirpur, Ambala City	PHED	3.25	31.01.2024
8	Ambala	Devi Nagar, Ambala City	PHED	3	31.01.2024
9	Ambala	Naraingarh	PHED	3	31.03.2024

Sr. No.	Name of the district	Name of the town/ city	Deptt.	Existing STP and Capacity (MLD)	Likely date of achieving standards
10	Kurukshetra	Modal Town, Pehowa	PHED	8	31.03.2024
11	Panchkula	Kalka	PHED	4.5	31.12.2023
Total=11 No.				46.25 MLD	

ii) Status of CETPs of Haryana:

There are total 3 no. of CETPs of 6 MLD capacity already operational in aforesaid 4 districts of Haryana. The Joint committee has also visited all of these 3 no. of CETPs and collected effluent samples from their inlet and outlet. Further, the Compliance status /operational efficacy based upon the latest analysis reports available of these CETPs is given as below:-

Sr. No.	Name of CETP	Capacity in MLD	Deptt.	Date of Sampling	Compliance status
1	IE Barwala, Panchkula	0.5	HSIIDC	18.08.2023	Complying
2	Ambala Cantt.	0.5	HSIIDC	10.07.2023	Complying
3	Saha, Ambala	5	HSIIDC	21.08.2023	Complying
	Total capacity	6 MLD			

iii) Status of Standalone Effluent Treatment Plants (ETP) & Sewage Treatment Plants (STP) installed by industries in 04 Districts of Haryana:-

There are total 70 no. of industries falling in catchment area of River Markanda or its tributaries in all the 04 Districts i.e. Panchkula, Ambala, Kurukshetra and Kaithal of Haryana. All of the units has obtained mandatory Consent to Operate (CTO) from the State Board for discharge of treated effluent of the respective quantum. All of the industries have installed their individual Standalone Effluent Treatment Plants/ Sewage Treatment Plants (ETPs/STPs) with having capacity based upon the requirement. The abstract of ETPs/STPs installed and operational in these industries is given as below:-

Sr. No.	District	No. units having Standalone ETP's & STP's	Total Consented Discharge & Capacity of treatment facility installed (in MLD)	Latest Compliance Status
1	Ambala	34	6.52	34
2	Kurushetra	12	2.14	12
3.	Panchkula	24	1.52	24
4.	Kaithal	NIL, as no industry falling in catchment area of River		
	Total	70	10.18 MLD	70

The Compliance status/operational efficacy of Standalone ETP & STP alongwith details of Mode of disposal of the treated effluent of these 70 no. of Industries is attached as **Annexure-J**.

5. Proposals for setting up of new STPs if any

I. Status of Himachal Pradesh, as provided by HPSPCB:-

To cater the untreated domestic sewage/sullage from villages located in Kala Amb area of H.P. i.e. Moginand, Rampur Jattan, Mainthapal, Ogli, Johron, Khairi and Trilokpur, the Jal Shakti Vibhaghas already established two STPs (STP Trilokpur and CETP-cum-STP Kala Amb. The civil structure of STP Trilokpur and STP Kala Amb is already completed by Jal Shakti Vibhag Nahan. The total pipeline to be laid for STP Trilokpur is 8.5kms out of which work of laying pipeline of approx. 7.9 km was completed. Work of laying total sewerage pipeline of 21.645 kms for Moginand, Rampur Jattan, Mainthapal and Ogli in Kala Amb out of which work of 20.500kms was completed. The sewer network of STP Kala Amb and STP Trilokpur has suffered major damages due to heavy rainfall causing flash floods in this monsoon season. Restoration work of these sewerage network shall be started again by Jal Shakti Vibhag and will be completed by 31.03.2024. **The entire sewage generation from aforementioned villages of Kala Amb area of H.P. shall be treated after operationalization of these STPs. There will be no sewage gap for Kala Amb area of H.P. Hence, there is no fresh proposal for setting up of any new STP/CETP in Kala Amb.**

II. Status of Haryana, as provided by HSPCB:-

There is a Proposal for setting up of new 04 no. of STPs with MC/ ULBD to cater out the need of treatment of MC area, Ambala Sadar with the details given below:-

Sr. No.	Name & address of STP proposed	Estimated date of commissioning	Capacity (in MLD)	Avg. Quantum of discharge to be received at inlet (in MLD)	Source of effluent will be received/ area/ drain of Tapping	Treatment technology (MBBR/ SBR/UASB/ others)
1	12 Cross road	31.12.2024	12	9.75	Domestic effluent from residential colonies which is presently being discharged into River Tangri via Mahesh Nagar Drain	Sequential Batch Reactor
2	Khuda Khurd	31.12.2024	12	7.29	-----do-----	Sequential Batch Reactor

3	Machonda	31.12.2024	10	4.9	-----do-----	Sequential Batch Reactor
4	Babyal	31.12.2023	10	5.98	-----do-----	Sequential Batch Reactor
		Total	44 MLD			

6. Dredging of the River/Drain required if any.

I. Status of Haryana State:-

The dredging has not been done in river Markanda and desilting of this river is required. Further, The Mining & Geology Department, Haryana has issued Letter of Intent (LOI) to the various mining contractors and the details for mining allowed in River Markanda and its Tributaries by the Mining & Geology Department in Haryana is given as below:

Sr. No.	District	Name of Mining Contractor	Details of Villages in Which mining approved to the contractor	Mining Area approved (in Hectare)	Name of River	Date of LOI issued	Present Status of Mining by Contractor
1.	Ambala	1.M/s Reliable Mining Corp. SR-68 DLF Phase- 3, Gurugram	Fatehpur, Laha, Batoura, Nagoli, Banaudi, Bari Bassi	105.51	Begna River	28.07.22	Mining work not started yet
		2. M/s R.M Mines and Infra Pvt. Ltd. R/o 149, Laxmi Garden, Yamuna Nagar.	Toka, Chichi Majra, Sangrani, Sahpur, Rao Majra, Dera, Hamidpur, Dehar	247	Roon and Markanda River	28.07.22	Mining work not started yet
		3. M/s SCP Commodities, C-509, DDA Flates, Sec- 29, Rohini New Delhi.	Gadouli, Ambli	99.09	Markanda River	28.07.22	Mining work not started yet
		4. M/s M P Traders, Karnal Road, Tehsil Indri District Karnal	Kharu Khera	8.98	Markanda River	21.07.23	Mining work not started yet
		5. M/s PS Enterprises R/o 1309, Modern Colony, Kansapur Road, Shivpuri, Yamuna Nagar	Rayewali, Sadhapur, Jatwar, Samru, Khera Jattan, Bodyo, Tepla	90.29	Tangri River	21.07.23	Mining work not started yet
2.	Kurukshtra	M/s Markandeshwar Construction Co., Vill- Ajrana Kalan, District Kurukshetra	Damli, Ramnagar, Patti Kakra, Gumti, Malakpur, Kalsana, Mugalmajra, Kathuwa, Ajrana Khurd, Patti, Sehzadpur, Jhansa, Thaska Miranji, Khanjarpur, Tangore, Ajmatpur, Dunia Majra, Jalbera	331.69	Markanda River	03.01.14	The said contract was terminated by Director Mines & Geology Deptt. Haryana vide order dated 02.06.2017
3.	Panchkula	M/s Vishnu Enterprises	Natwal PKL B-17	35.34	Tangri River	16.11.2017	The said contract was terminated

							by Director Mines & Geology Deptt. Haryana
4.	Kaithal	NIL, as no mining contract has been allotted to any contractor in District Kaithal					

II. Status of Himachal Pradesh:-

Presently, there are no policy guidelines with the Geological wing Department of Industries w.r.t. de-silting or dredging of river bed of River Markanda (from Khajurna Bridge near Bikram Bagh to Sadhoura Bridge, Kala Amb in Himachal Pradesh).

7. Rejuvenation/remedial measures required if any.

I. Status of Haryana State, as provided by HSPCB:-

The Water quality of River Markanda after confluence of Jattanwala Nallah at Village-Dera, Haryana is deteriorating further due to discharge of effluent generating from Kala Amb area of both States i.e Himachal Pradesh and Haryana. Further the Rejuvenation/remedial measures Plan of whole of the River Markanda will be proposed if required based upon the final report to be submitted by the Joint committee in the present matter after receipt of analysis reports of the various samples collected of River Markanda and its tributaries i.e. after assessment of water quality. Although presently no Rejuvenation/remedial measures Plan has been claimed/suggested in the Revenue Estate of Haryana by Irrigation & Water Resources Department (Jal Shakti), Haryana.

II. Status of Himachal Pradesh, as provided by HPSPCB:-

HPSPCB is regularly monitoring the water quality of River Markanda, ground water quality of Kala Amb area, surprise inspection/monitoring of industries and taking appropriate legal action against the violators as per mandate of State Board.

- HPSPCB is regularly monitoring the water quality of River Markanda on bimonthly basis. The State Pollution Control Board is collecting the surface water samples of River Markanda at different locations i.e. River Markanda Downstream Salani Khad at Moginand, River Markanda Upstream Kala Amb and River Markanda Downstream Kala Amb. The analysis results of River Markanda in Kala Amb area of Himachal Pradesh is meeting the water quality parameters of Class-B as per CPCB criteria for Designated Best Use of Water.
- HPSPCB is regularly monitoring ground water quality of industrial area as well as residential area of Kala Amb Himachal Pradesh. No ground water contamination is observed.

- HPSPCB is regularly conducting surprise inspection of industries in Kala Amb area to ensure compliance to norms. HPSPCB has taken action against 16 number of defaulting industries under the provisions of Water (Prevention and Control of Pollution) Act, 1974 and has further imposed and recovered environmental compensation of Rs. 7,43,750/- in FY 2019-20, Rs. 18,70,000/- in FY 2020-21, Rs. nil in FY 2021-22, Rs. 2,68,750/- in FY 2022-23, Rs. 2,75,000/- in FY 2023-24 till date. Total EC recovered from 16 number of industries is Rs. 3157500 (Thirty One Lakhs Fifty Seven Thousand and Five Hundred Rupees only).
- *Hon'ble NGT in O.A. No, 673/2018 has directed for rejuvenation of 07 polluted river stretches in Himachal Pradesh including River Markanda and prepare the action plan. HPSPCB has already prepared action plan for rejuvenation of River Markanda and progress report is monitored at State level by State Surveillance Task Force chaired by Worthy Chief Secretary, Govt. of H.P. and at district level by District Level Surveillance Task Force chaired by Deputy Commissioner, Sirmaur on monthly basis. Now, as per draft report of CPCB regarding polluted river stretches for restoration of water quality (2022), there is continuous improvement in water quality of River Markanda and has upgraded the status from priority Class-II to priority Class-V.*

The State of Himachal Pradesh has also proposed/recommended, as under:

- i) After functioning of CETP-cum-STP Kala Amb (2.5 MLD) and STP Trilokpur (1.5 MLD), there will be more improvement in the water quality of the river Markanda. Similar facility for the management of sewage in the Kala Amb part of Haryana is required.
- ii) Jal Shakti Vibhag Nahan to repair all the damaged pipeline and get the household connections in coordination with Project Officer (PO), District Rural Development Authority (DRDA) Sirmaur, Block Development Officer (BDO), Nahan and District Panchayat Officer (DPO), Sirmaur.
- iii) Special Purpose Vehicle i.e. Kala Amb Infrastructure Development Company (KIDC) to ensure 100% collection and treatment of effluent of all member unit in CETP Kala Amb and shall adhere to discharge standards as per Sr. no. 55 of Schedule-I of The Environment (Protection) Rules, 1986.
- iv) Special Area Development Authority (SADA) Trilokpur to ensure proper collection, segregation and processing of solid waste other than Municipal Council limits in coordination with BDO Nahan.
- v) Regular cleaning of industrial area drains of Kala Amb area of H.P. to be carried out by IADA to ensure no stagnation of water and HPPWD shall ensure proper cleaning of roadside drains of Kala Amb area of H.P. under their jurisdictional area.
- vi) Jal Shakti Vibhag to maintain and operate Real Time Water Quality Monitoring Station (RTWQMS) at Kala Amb.
- vii) Department of Industries shall identify and notify the non-hazardous waste management site for industrial units in Kala Amb area.

C. Progress Report of the Work assigned to the Joint Committee:-

a) First Meeting of the Joint Committee held on dated 12/6/2023:

In compliance of Hon'ble NGT orders dated 14.03.2023, the first meeting of the joint Committee was held on 12/6/2023, wherein the following information was requested from the concerned departments with deadline of one week, so as to decide sampling locations and sampling schedule:

1. *Route map of Markanda River from its origin point to Shahbad Markanda, clearly indicating the drains with indicative discharge, location/list of industries with quantity and mode of discharge of treated effluent, STPs (alongwith catchment area) CETPs, Residential Colonies within a radius of 5 Km.*

2. *Irrigation Management Plan (IMP) of the industries discharging treated effluent on to land for irrigation/plantations, so as to verify is the effluent is being discharges as per Guidelines prepared by CPCB under the directions of Hon'ble NGT in the matter of O.A. No. 348/2017, Shailesh Singh Vs Al-Dua Food Processing Pvt. Ltd.*

It was also decided in the meeting that the above information will be provided to Joint Committee within 7 days and thereafter, sampling will be completed within 15 days before the onset of monsoon i.e before 30th June.

However, the information sought in the first meeting was provided by Haryana State Pollution Control Board (HSPCB) w.r.t. State of Haryana, on September 5th, 2023 and by Himachal Pradesh State Pollution Control Board (HPSPCB) w.r.t. State of Himachal Pradesh on September 19th, 2023.

Since the above information was provided to the Joint Committee after onset of Monsoon Season, the monitoring of River Markanda as directed by Hon'ble National Green Tribunal Could not be conducted for pre-monsoon season, as decided in the first meeting of the Joint Committee.

*Further, in view of the fact, monitoring of the river w.r.t. contamination is not expected to give any conclusion, if conducted during monsoon season (July-September), due to very high dilution with storm water/rain water, **the Joint Committee was able to start on the work assigned to it by the Hon'ble NGT i.e "to conduct the monitoring of the Markanda River" in the post monsoon season (October-November) starting from first week of October, 2023.***

b) Markanda River and its Tributaries in Himachal Pradesh and Haryana:

The total length of river Markanda from origin point in Himachal Pradesh to exit point at Kala Amb in Himachal Pradesh is approximately 24.00 KM. River Markanda enters the Kala Amb area at Bikrambagh and leaves Himachal Pradesh at Sadhaura Bridge in Kala Amb. It covers a distance of approx. 6 kms in Kala Amb, thereafter the River covers a distance of approx. 125 kms in Haryana before merging in to River Ghaggar at District Kaithal.

Further during enquiry of the topography of River Markanda and its other tributaries in the present interstate matter it was acknowledged that River Markanda and its other tributaries flowing through **01 No.** of District of State of Himachal Pradesh i.e. **Sirmaur**, **02 No.** of Districts of State of Punjab i.e. **Mohali & Patiala** and **04 No.** of Districts of State of Haryana i.e. **Panchkula, Ambala, Kurukshetra & Kaithal**. The State wise details of River Markanda and its other tributaries are given below in the table:-

Sr. No.	Name of River	Origin Point	Merging into River at Point	Length of flow (KM)	States in Catchment Area
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INDEX PLAN OF RIVER MARKANDA AND ITS TRIBUTRIES

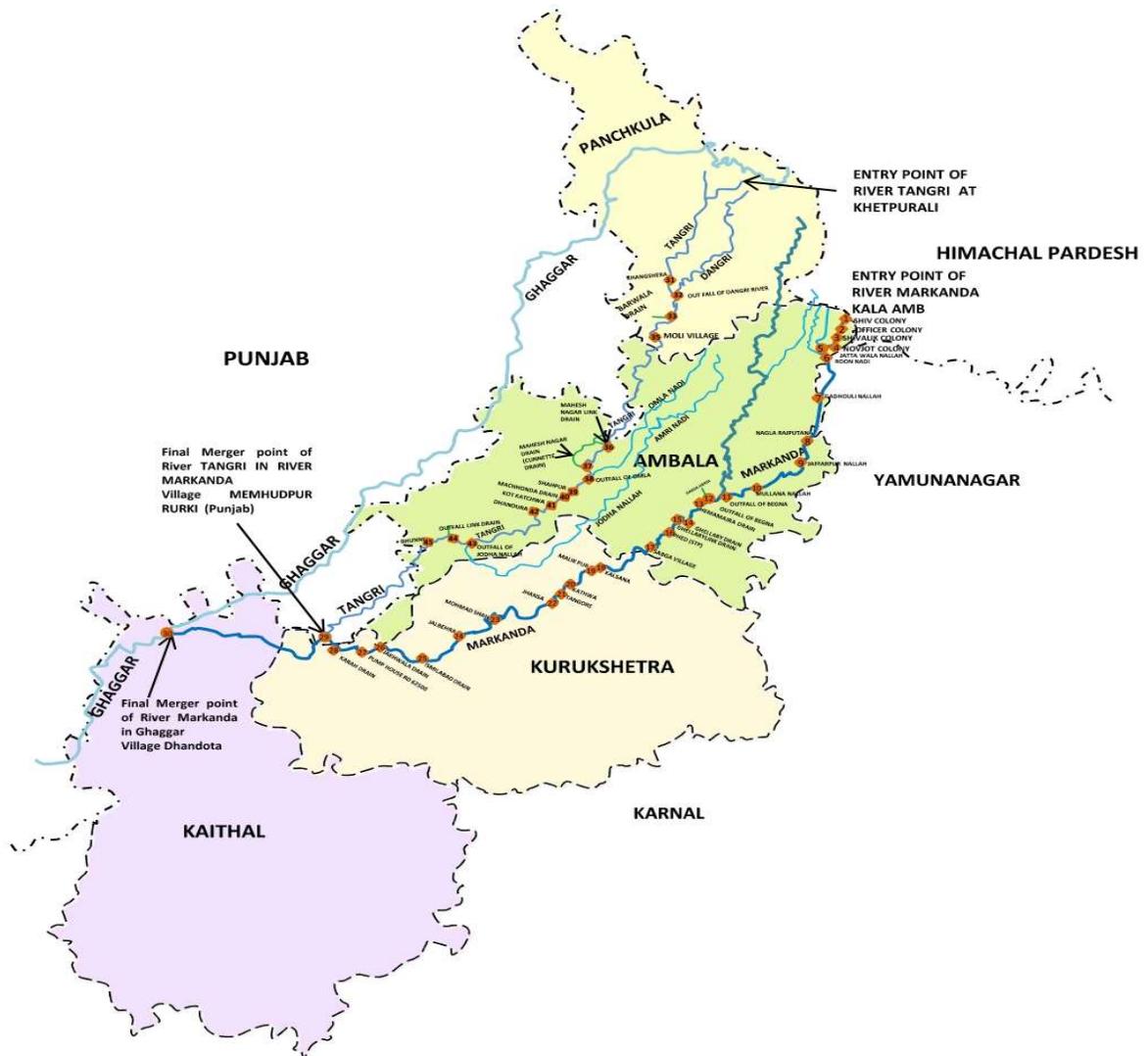


Figure No. 2

c) Monitoring of River Markanda, its tributaries/rivulets, drains, CETPs, STPs and Industries falling in catchment area:

It was directed by Hon'ble National Green Tribunal vide order dated 14.3.23 that *"The Joint Committee shall also arrange collection of samples of water from different strategic locations (outfall of STPs/ETPs/CETPs) and at the interval of 1 KM of drain/River and analysis of the same with respect to all relevant parameters including presence of heavy metals."*

Based upon the information provided by both of the PCBs to CPCB, the joint committee has completed the partial work w.r.t. inspection & sampling of River/ Rivulets/ Drains merging into River and STPs/ CETPs/ Industries located in catchment area of River Markanda and its Tributaries with covering **District Sirmaur** in Himachal Pradesh and **District Panchkula & Ambala** in Haryana in two phases i.e. from 25th to 27th September, 2023 and from 8th to 12th October, 2023. The progress made in this regard is submitted, as follows:

I. Monitoring and Water Sampling of River Markanda and its Tributaries and Drains meeting into River Markanda and its Tributaries

The total length of Markanda River flowing in Himachal Pradesh and Haryana, is 149 Kms (24 Km in Himachal Pradesh and 125 Km in Haryana). Therefore, in order to comply with the directions of Hon'ble NGT with regard to collection of samples at the interval of 1 Km of drain/River, the Joint Committee was required to collect 149 samples. The Joint committee has also collected 34 samples of drains, River Markanda & its Tributaries from strategic locations including outfall of the untreated discharge points for 02 no. of Districts i.e. **Sirmaur** in HP & **Ambala** in Haryana as given in table appended below in order to assess the pollution load and quality of water flowing in River Markanda:-

Sr.No.	Date and Time of Sampling	Sampling Point and Description	Geographical Coordinates	Parameters to be analyzed	Finding/Remarks
Dated 25.09.2023					
1.	25/09/2023 09:56 AM	Combined drain carrying industrial effluent from Kala Amb and sewage from Kala Amb (H.P & Haryana) adjoining border area of H.P & Haryana	30.50622 77.20563	pH, TSS, BOD, COD, SAR, PO ₄ -P, NO ₂ -N, NO ₃ -N, NH ₃ -N, TKN, Heavy Metals, AOX, TC, FC,	The sample of the drain has been collected and sent to CPCB Laboratory at New Delhi. The Analysis Report is awaited.
2.	25/09/2023 11:04 AM	Drain u/s of Ruchira Paper Ltd., Trilokpur Road, Kala Amb, Himachal Pradesh.	30.50928 77.20857	pH, TSS, BOD, COD, PO ₄ -P, NO ₂ -N, NO ₃ -N, NH ₃ -N, TKN, Heavy Metals, TC, FC	--do--
3.	25/09/2023 11:14 AM	Drain d/s of Ruchira Paper Ltd., Trilokpur Road, Kala Amb, Himachal Pradesh.	30.50896 77.20771	pH, TSS, BOD, COD, SAR, PO ₄ -P, NO ₂ -N, NO ₃ -N, NH ₃ -N, TKN, Heavy Metals, TC, FC.	--do--
Dated 08.10.2023					
4.	08/10/2023 9:35 AM	River Markanda u/s of drain near M/s Vashisth Chemicals, Kala Amb	30.50325 77.21895	BOD, Calcium, Chloride, COD, Color, Conductivity, Fluoride, K+, Magnesium,	--do--
5	08/10/2023 10:03 AM	River Markanda d/s of drain near M/s Vashisth Chemicals, Kala Amb	30.50225 77.2191	Na+, NO ₂ - N, NO ₃ - N, pH, Phosphate - P, Sulphate, TDS, Total	--do--
6	08/10/2023 12:20 PM	River Markanda u/s of Rampur Jattan drain near Radha Swami Satsang Bhawan , Kala Amb	30.506497 77.22151	Alkalinity, Total Hardness as CaCO ₃ , Total Suspended Solids,	--do--

7	08/10/2023 12:25 PM	River Markanda d/s of Rampur Jattan drain near Radha Swami Satsang Bhawan, Kala Amb	30.50602 77.2209	Turbidity, Ammonical Nitrogen TC, FC, Heavy Metals	--do--	
8	08/10/2023 01:19 PM	River Markanda u/s of Salani Khadd	30.51655 77.24601		--do--	
9	08/10/2023 01:24 PM	River Markanda d/s of Salani Khadd	30.51574 77.246060		--do--	
10	08/10/2023 02:06 PM	River Markanda near Khajurna bridge on Suketi Road	30.51659 77.24604		--do--	
11	08/10/2023 04:06 PM	River Markanda u/s Jattanwala Nallah at Markanda Bridge Kala Amb, Himachal Pradesh	30.49626 77.21067		--do--	
12	08/10/2023 05:33 PM	River Markanda u/s Jattanwala Nallah opposite Dera, Hamidpur, Naraingarh, Haryana.	30.49384 77.20008		--do--	
13	08/10/2023 06:48 PM	River Markanda d/s Jattanwala Nallah opposite Dera, near Hamidpur Bridge, Naraingarh, Haryana.	30.47105 77.17793		--do--	
14	08/10/2023 09:39 AM	Drain near Vashisth Chemicals, Kala Amb	30.50325 77.21909		BOD, COD, Color, NO3- N, pH, Phosphate - P, Sulphate, TDS, TSS, Ammonical Nitrogen, Heavy Metals	--do--
15	08/10/2023 12:30 PM	Rampur Jattan drain near Radha Swami Satsang Bhawan , Kala Amb	30.506261 77.221180			--do--
16	08/10/2023 01:29 PM	Salani Khadd , Kala Amb	30.516903 77.246352			--do--
17	08/10/2023 04:50 PM	Officer Colony drain, Haryana	30.496343 77.206595			--do--
18	08/10/2023 05:09 PM	Navjot Colony Drain, Haryana	30.49606 77.20265			--do--
19	08/10/2023 05:54 PM	Jattan Wala Nalah opposite Dera, Haryana	30.49223 77.19774			--do--
20	08/10/2023 06:01 PM	Stagnant Water from Jattan Wala Nala in Markanda River opposite Village-Dera, Haryana	30.49173 77.19772	--do--		
Dated 11.10.2023						
21	11/10/2023 11:23 AM	Roon River, Near Chhoti Rasaur, Naraingarh, Ambala	30.44747 77.16883	BOD, Calcium, Chloride, COD, Color, Conductivity, Fluoride, K+, Magnesium,	The river is carrying rainy water and merging into River Markanda. Approx. 131 MLD flow of discharge is estimated. The	

				Na+, NO2- N, NO3- N, pH, Phosphate - P, Sulphate, TDS, Total	Analysis Report of the water sample collected is awaited from CPCB Laboratory at Delhi.
22	11/10/2023 11:30 AM	River Markanda b/c to River Roon, Near Chhoti Rasaur, Naraingarh, Ambala	30.44709 77.169685	Alkalinity, Total Hardness as CaCO3, Total Suspended Solids, Turbidity, Ammonical	The Analysis Report of the water sample collected is awaited from CPCB Laboratory at Delhi
23	11/10/2023 11:39 AM	River Markanda a/c to River Roon, Near Chhoti Rasaur, Naraingarh, Ambala	30.44398 77.16881	Nitrogen, TC, FC, Heavy Metals	--do---
24	11/10/2023 12:33 PM	River Markanda u/s Gadauli Village Drain , Ambala	30.37972 77.16596		--do---
25	11/10/2023 12:38 PM	River Markanda d/s Gadauli Village Drain , Ambala	30.37937 77.16555		--do---
26	11/10/2023 03:33 PM	River Begna opposite Mullana b/c to river Markanda, Ambala	30.279013 77.028962		The river is carrying rainy water and merging into River Markanda. Approx. 0.52 MLD flow of discharge is estimated. The Analysis Report of the water sample collected is awaited from CPCB Laboratory at Delhi.
27	11/10/2023 03:30 PM	River Markanda at Mullana b/c to river Begna and Mullana Drain, Ambala	30.27885 77.02974		The Analysis Report of the water sample collected is awaited from CPCB Laboratory at Delhi
28	11/10/2023 03:48 PM	River Markanda d/s Mullana Village, Near Markandeshwar Mandir, Ambala	30.27698 77.02683		--do---
29	11/10/2023 05:34 PM	River Markanda at Harda Hardi Village u/s Shergarh Village , Ambala	30.242263 76.975086		--do---
30	11/10/2023 05:52 PM	River Markanda near Shergarh Village, d/s Harra, Ambala	30.25084 76.96874		--do---

31	11/10/2023 06:41 PM	River Markanda near Pasiyala Village, Ambala	30.22119 76.94614		--do---
32	11/10/2023 12:40 PM	Gadauli Village Drain merging in River Markanda, Gadauli Village, Ambala	30.37972 77.16591	BOD, COD, Color, NO3- N, pH, Phosphate - P, Sulphate, TDS, TSS, Ammonical Nitrogen, Heavy Metals	The untreated domestic effluent was being directly discharged in River Markanda. 0.91 MLD flow of discharge is estimated. The Analysis Report of the water sample collected is awaited from CPCB Laboratory at Delhi
33	11/10/2023 03:25 PM	Mullana Drain merging in River Markanda at Mullana, Ambala	30.27873 77.03041		The untreated domestic effluent was being directly discharged in River Markanda. 0.29 MLD flow of discharge is estimated. The Analysis Report of the water sample collected is awaited from CPCB Laboratory at Delhi
34	11/10/2023 06:08 PM	Harda Hardi Drain merging in River Markanda, Ambala	30.25085 76.96857		The drain is built up by irrigation department for carrying rainy water. 0.36 MLD flow of discharge is estimated. The Analysis Report of the water sample collected is awaited from CPCB Laboratory at Delhi

II. Inspections of Sewage Treatment Plants (STPs)/ Common Effluent Treatment Plants (CETPs)

The Inspections and Sampling of Sewage Treatment Plants (STPs)/ Common Effluent Treatment Plants (CETPs) falling in the catchment area of River Markanda and its Tributary was carried out by Joint Committee with having the details given below:-

Sr.No.	Date and Time of Sampling	STP/CETP Location and Capacity	Details of Sampling Points	Geographical Coordinates	Parameters to be analyzed	Findings/ compliance status
1.	25/09/2023 09:04 AM	CETP Kala Amb & STP Trilokpur, Himachal Pradesh	CETP Kala Amb 2.5 MLD capacity (0.8 MLD industrial effluent part and 1.7 MLD sewage part) and STP Trilokpur 1.5 MLD capacity are under commissioning and not yet started functioning, due to damage of sewerage pipelines laid by Jal Shakti Vibhag in recent flash floods in River Markanda, as informed by the representative of CETP/STP. Hence, sampling of CETP Kala Amb and STP Trilokpur could not be conducted.			

2.	25/09/2023 02:19 PM	03 MLD STP, PHED, Naraingarh, Ambala, Haryana.	Outlet of STP	30.46872 77.11949	pH, TSS, BOD, COD, PO4-P, NO2-N, NO3-N, TKN, NH3- N Heavy Metals, TC, FC	The sample of the unit has been collected and sent to CPCB Laboratory at New Delhi. The Analysis Report is awaited.
3.	25/09/2023 05:04 PM	04 MLD STP, PHED, Barara, Ambala, Haryana.	Outlet of STP	30.21678 77.02915	pH, TSS, BOD, COD, PO4-P, NO2- N, NO3-N, TKN, NH3- N Heavy Metals, TC, FC	The sample of the unit has been collected and sent to CPCB Laboratory at New Delhi. The Analysis Report is awaited.
4.	26/09/2023 09:04 AM	HSI IDC CETP 0.5 MLD, Barwala, Panchkula, Haryana	Inlet of CETP	30.59568 76.95259	pH, TSS, COD, BOD	The sample of the unit has been collected and sent to CPCB Laboratory at New Delhi. The Analysis Report is awaited.
			Outlet of CETP	30.5958 76.95271	pH, TDS, TSS, FDS, COD, BOD, SO42- PO4-P, NO3-N, Cl- F-, Heavy Metals, mercury, CR+6, Cyanide, TKN, Ammonical Nitrogen, phenols, Sulphide, Oil & Grease.	
5.	26/09/2023 11:24 AM	5 MLD, CETP Saha, Ambala, Haryana.	Inlet of CETP	30.28473 76.96812	pH, TSS, COD, BOD, Oil & Grease.	The sample of the unit has been collected and sent to CPCB Laboratory at New Delhi. The Analysis Report is awaited.
			Outlet of CETP	30.28477 76.96651	pH, TDS, TSS, FDS, COD, BOD, SO42- PO4-P, NO3-N, Cl- F-, Heavy Metals, mercury, CR+6, Cyanide, TKN, Ammonical Nitrogen, phenols, Sulphide, Oil & Grease.	<i>Further, the OCEMS installed by the Unit was found to be mastered/tempered/w rongly calibrated in such a way that even discharge of untreated waste water will show compliance of norms in OCEMS. This needs to be investigated further by Joint Committee/SPCB.</i>

6.	26/09/2023 12:46 AM	HSI IDC CETP 0.5 MLD, Ambala Cantt, Haryana.	Inlet of CETP	30.3348 76.88404	pH, TSS, FDS TDS, COD, BOD	The sample of the unit has been collected and sent to CPCB Laboratory at New Delhi. The Analysis Report is awaited.
			Outlet of CETP	30.33475 76.8842	pH, TDS, TSS, FDS, COD, BOD, SO42- PO4-P, NO3-N, Cl- F-, Heavy Metals, mercury, CR+6, Cyanide, TKN, Ammonical Nitrogen, phenols, S- Oil & Grease.	

III. Inspections of Industrial Units:-

The only 17 Category industry located in Kala Amb viz. M/s Ruchira Papers Ltd., Trilokpur Road, Kala Amb in question as per the averments made by the complainant was visited by the Joint Committee on dated 25/9/23, status of which is described in the following table. Further the random Inspections and Sampling of other Industries falling in the catchment area of River Markanda in both of the states was carried out by Joint Committee, so as to know the compliance, in general. The details of the industries inspected is given below:-

Sr. No.	Date and Time of Sampling	Name of Industry	Details of Sampling Points	Geographical Coordinates	Parameters to be analyzed	Key findings
1.	25/09/23 10:16 AM	M/s Ruchira Paper Ltd., Trilokpur Road, Kala Amb, Himachal Pradesh. (Paper Mill)	Outlet of ETP	30.50924 77.20827	pH, TSS, BOD, COD, SAR, Heavy Metals, AOX, TC, FC	The samples collected by the Joint Committee are under analysis in CPCB Laboratory at New Delhi. The Analysis Report is awaited. The Analysis Report is awaited. All the components of the ETP installed by the unit were found in operation at the time of visit of the Joint Committee. <i>The details requested from the Unit through SPCB, to as to verify the compliance of various rules/charter, with regard to Hazardous waste generation/disposal, Use of Chlorine and bleaching sequence, Generation and recycling of lime sludge</i>
			Aeration Tank of ETP.	30.50988 77.20803	MLSS, MLVSS	

						<p><i>and base line data as provided in EIA report, Green belt and source of water used in the green belt, are still awaited from the Industry and SPCB.</i></p> <p><i>Further, the OCEMS installed by the Unit was found to be mastered/tempered / wrongly calibrated in such a way that even discharge of untreated waste water will show compliance of norms in OCEMS. This needs to be investigated further by Joint Committee/SPCB.</i></p> <p><i>The industry has to dispose off its treated effluent, for agriculture, plantation and in the drain, as per conditions of Environmental Clearance granted by MoEF&CC. However, the industry is disposing off its treated effluent only in drain, despite the fact that 33% of the area, as informed by the Unit and SPCB, is under plantation.</i></p>
2.	08/10/23 08:15 AM	M/s Vashisth Chemicals, Kala Amb	<p><i>The unit has been given consent as ZLD Unit. At the time of visit, no effluent was under recycling and hence sample was not taken. As per records provided by the unit, the generation of by-product was found to be more than double in comparison to the quantity mentioned in the CTO, against the permitted production. This needs further analysis/investigation, to ascertain exact production/by-product generation.</i></p>			
3.	08/10/23 11:14 AM	M/s Rich Graviss Products Pvt. Ltd., Kala Amb, Himachal Pradesh	Inlet of ETP Outlet of ETP Aeration tank	30.5041 77.21483	BOD, COD, pH, TSS, Oil & grease, MLSS, MLVSS	<p>The samples of the unit have been collected and sent to CPCB Laboratory at New Delhi. The Analysis Report is awaited. The treated effluent of ETP is being utilized for irrigation/gardening purpose in 1.5 hectare additional land located adjacent to the unit.</p> <p><i>The Unit has not prepared and implemented Irrigation Management Plan.</i></p>
4.	09/10/23 12:17 PM	M/s N.V. Distilleries Pvt. Ltd., Badhuali,	Inlet of ETP	30.34784 77.02973	BOD, COD, Color, pH,	The sample of the unit have been collected and sent to CPCB Laboratory at New

		Teh-Naraingarh, Ambala, Haryana (Distillery)	Final Outlet		TSS, Oil & grease	Delhi and the Analysis Report is awaited. The unit is based on ZLD technology and no effluent was being discharged outside its premises in any mode as verified during inspection. <i>The Unit was found be not complying with various provisions of Hazardous Waste Management Rules, 2016. The details requested from the Unit/SPCB regarding ETP sludge generation is yet to be received by the Joint Committee.</i> <i>The provision of PTZ camera as per CPCB guidelines need to be provided at required location and verified by SPCB.</i>
5.	09/10/23 10:51 AM	M/s N.V. International Pvt. Ltd., Badhuali, Tehs. Naraingarh, Ambala, Haryana (Distillery)	Inlet of ETP Final Outlet of ETP	30.34814 77.03356	BOD, COD, Color, pH, TSS, Oil & Grease	The sample of the unit have been collected and sent to CPCB Laboratory at New Delhi and the Analysis Report is awaited. The unit is based on ZLD technology and no effluent was being discharged outside its premises in any mode as verified during inspection. <i>The Unit was found be not complying with various provisions of Hazardous Waste Management Rules, 2016. The details requested from the Unit/SPCB regarding ETP sludge generation is yet to be received by the Joint Committee.</i> <i>The provision of PTZ camera as per CPCB guidelines need to be provided at required location and verified by SPCB.</i>
6.	09/10/20 23 03:06 PM	M/s Oasis Commercial Pvt. Ltd., Village Jatwar Tehsil	Inlet of ETP Final Outlet	30.43073 76.92208	BOD, COD, Color, pH, TSS, Oil & Grease	The sample of the unit have been collected and sent to CPCB Laboratory at New Delhi and the Analysis Report is awaited. The

		Naraingarh Distt Ambala (Distillery)				unit is based on ZLD technology and no effluent was being discharged outside its premises in any mode as verified during inspection.
7.	09/10/2023 03:06 PM	M/s Oasis Overseas Exports Pvt. Ltd., Village Jatwar Tehsil Naraingarh Distt Ambala (Distillery)	Inlet of ETP Final Outlet	30.43073 76.92208	BOD, COD, Color, pH, TSS, Oil & Grease	The sample of the unit have been collected and sent to CPCB Laboratory at New Delhi and the Analysis Report is awaited. The unit is based on ZLD technology and no effluent was being discharged outside its premises in any mode as verified during inspection.
8.	09/10/2023 03:37 PM	Oasis Ethanol Pvt. Ltd., Village Jatwar Tehsil Naraingarh Distt Ambala (Distillery)	Inlet of ETP Final Outlet	30.43214 76.92378	BOD, COD, Color, pH, TSS, Oil & Grease	The sample of the unit have been collected and sent to CPCB Laboratory at New Delhi and the Analysis Report is awaited. The unit is based on ZLD technology and no effluent was being discharged outside its premises in any mode as verified during inspection. <i>The unit has voluntarily provided OCEMS (as not mandated for ZLD Units) for COD, BOD and TSS, pH for self-monitoring.</i> <i>However, the OCEMS installed by the Unit was found to be mastered/tempered /wrongly calibrated in such a way that even discharge of untreated waste water will show compliance of norms in OCEMS.</i>

D. Other key observations, Conclusions and Recommendations of the Joint Committee:

1. In accordance with the directives of the Hon'ble National Green Tribunal, the Joint Committee was tasked with collecting a total of 149 samples. At present, the Joint Committee has gathered 34 samples, encompassing two districts, namely Sirmaur in Himachal Pradesh and Ambala in Haryana. These samples are presently undergoing analysis at the CPCB Laboratory. The process of collecting samples from other districts (Panchkula, Kurukshetra and Kaithal) is ongoing. *The Joint Committee anticipates completing the collection and analysis of the remaining 115 samples within a span of 12 weeks. This will be achieved by maintaining a rate of 15 samples per week, covering an area of 15 kilometers per week.*
2. Upon reviewing the route map and engaging in various discussions, the Joint Committee has observed that River Tangri is a significant tributary of River Markanda, with its origin in the Shivalik Foothills of Haryana. *It eventually joins River Markanda at Village Memadpur Rurki in Punjab, flowing through Patiala District in the State of Punjab and Panchkula & Ambala Districts in the State of Haryana. As a result, it is recommended to investigate the specific sources responsible for the direct or indirect discharge of untreated domestic sewage or industrial effluents into both River Markanda and River Tangri within the revenue estate of the State of Punjab.* It is recommended that Nodal agencies (SPCBs) in this matter communicate and get more details from Punjab, as collected w.r.t. Haryana and Himachal Pradesh.
3. The sporadic checks conducted by the Joint Committee on the calibration of Online Continuous Emission Monitoring Systems (OCEMS) in a few industrial units and CETPs during the investigation have revealed a concerning pattern. *It appears that the OCEMS assessed by the Joint Committee have been manipulated or inaccurately calibrated. This manipulation is carried out in a manner that makes these OCEMS falsely indicate compliance with the norms set by CPCB/SPCB when transmitting data to the CPCB/SPCB server. As a result, even if untreated or partially treated effluents are discharged during unconventional hours, whether accidentally or intentionally, the OCEMS still registers compliance. It is recommended that a detailed investigation in this matter may be conducted by respective SPCBs, to conclude and rectify this anomaly.*
4. CPCB team during visit to the Kala Amb area for attending meeting of the Joint Committee on 12/6/2023 and 25/9/2023 to the Kala Amb area, which spans both Haryana and Himachal Pradesh, *has noted instances of industrial effluent being released into the Markanda River, as evidenced in Photographs 1 and 2 of Annexure-K.* These Photographs were shared with HSPCB, HPPCB and other members of the Joint Committee along with Coordinates in the WhatsApp group specifically created for information sharing related to this matter, for their reference and timely and necessary action. The Members of the Joint Committee later on also visited these locations for sample collection. *Nonetheless, additional investigation and surprise inspections are necessary to definitively identify the origin of the effluent in the River Markanda, which may be planned after receipt of results of the samples collected by Joint Committee, which are currently under analysis in CPCB Laboratory.*

5. All industries that utilize treated effluent for on-land irrigation and plantation are obligated to develop and execute an Irrigation Management Plan (IMP) in accordance with the guidelines established by the CPCB, following the directives of the Hon'ble National Green Tribunal (NGT) in the case of O.A. No. 348/2017, Shailesh Singh Vs. Al-Dua Food Processing Pvt. Ltd. in 2019. Additionally, as per the CPCB's guidelines, the recommendations from the Irrigation Management Plan (IMP) must be included as conditions for obtaining Consent to Operate (CTO) from the State Pollution Control Boards (SPCBs). ***However, the Joint Committee has observed that neither the Haryana State Pollution Control Board nor the Himachal Pradesh State Pollution Control Board have incorporated the IMP as a CTO condition. Furthermore, none of the industries in both Haryana and Himachal Pradesh, which use treated water for irrigation and plantation, have developed or implemented an Irrigation Management Plan. This raises significant challenges in assessing whether these industries are employing treated effluent for irrigation and plantation without adversely affecting the quality of underground water and soil. It is recommended that the SPCBs take steps to ensure compliance with the directives of the Hon'ble NGT and CPCB Guidelines by issuing appropriate instructions.***
6. The Joint Committee has noted that a substantial volume of **lime sludge/waste** being dumped in the Kala Amb area of Haryana, spanning few kilometers (as shown in Photographs 3, 4, 5, and 6 in Annexure-K) without any information to SPCBs. This waste finds its way into the river, particularly during rainy periods. ***The HPPCB asserts that the region in question, where lime sludge is being dumped, falls under Revenue Estate of Haryana's and, therefore, pertains to HSPCB. However, according to HSPCB, the industries responsible for generating lime waste or sludge are located in Kala Amb, which is under Himachal Pradesh's jurisdiction, making it the responsibility of HPPCB. With neither SPCB taking ownership, the accumulation of lime sludge continues to grow.***

However, as per the records shared with the Joint Committee, only three industries in Kalaamb generate lime sludge or waste, and none of these industries are authorized to dispose of this waste like this, as it violates the conditions of the Consent to Operate (CTO) granted by the Himachal Pradesh PCB.

The joint committee has visited and inspected two of these units. M/s Ruchira Papers Ltd has installed Lime Kiln for regeneration of Calcium Oxide from Waste Lime Sludge and the Lime Kiln was in operation at the time of Visit. However, the records requested from the Unit through SPCB, w.r.t the quantum of Lime sludge generated and the recycled in the process, make up chemicals used to achieve desired purity and disposal of the excess Lime sludge equivalent to make up chemical, so as to examine the efficacy and efficiency of the recycling through mass balance approach followed by verification, are yet to be received. Similarly records shared by M/s Vashisht Chemicals indicated that Lime waste generation is more than double the quantity mentioned in the Consent to Operate (CTO) granted by HPPCB.

In view of this, without pin-pointing any Industry at this stage, Joint Committee requires additional time to conduct a thorough investigation and identify the specific industry or industries involved in the improper dumping of lime sludge along the banks of the Markanda River.

During this interim period, it is advisable for HSPCB to ascertain the information regarding the landowners of the areas where lime sludge is being deposited. This will help in identifying the responsible parties and taking appropriate legal actions against them.

7. *The Joint Committee has also witnessed unauthorized sand mining activities along and inside the Markanda River in the Kala Amb area of Haryana, as depicted in Photograph 7 and 8 of the Annexure-K. These activities are not permitted as mentioned by HSPCB in Section B of the Report. Consequently, these unauthorized mining activities are causing the formation of significant ditches in the riverbed, resulting in the pooling of wastewater. It is strongly recommended that the State Pollution Control Board (SPCB) address this issue with the Mining Department and initiate the necessary legal actions against those responsible for these activities.*

Based on the observations outlined above, *the Joint Committee does not support the perspectives presented by SPCBs (as detailed in Section B of the Report), which suggest that there is no need for the rejuvenation of the Markanda River in the Kala Amb and Haryana region.* This stance remains until a comprehensive conclusion is reached, encompassing all the directives of the Hon'ble NGT. *Meanwhile, it is advised that both the State Pollution Control Boards (HPSPCB and HSPCB) take necessary steps to address the violations and deficiencies by implementing the required actions in accordance with the relevant environmental laws.*

The above report is being filed by the Joint Committee for the consideration of Hon'ble National Green Tribunal and the Joint Committee shall abide by further directions of Hon'ble NGT, in this matter.

Names and Signatures of the Members of the Joint Committee

PAWAN SHARMA
Digitally signed by
PAWAN SHARMA
Date: 2023.10.17
18:36:27 +05'30'

Pawan Sharma Regional Officer,
Sirmaur, HPSPCB

Dr. Narender Sharma, Additional
Director, CPCB

AJAY SINGH
Digitally signed
by AJAY SINGH
Date:
2023.10.17
18:27:36 +05'30'

Ajay Singh
Regional Officer, Ambala, HSPCB

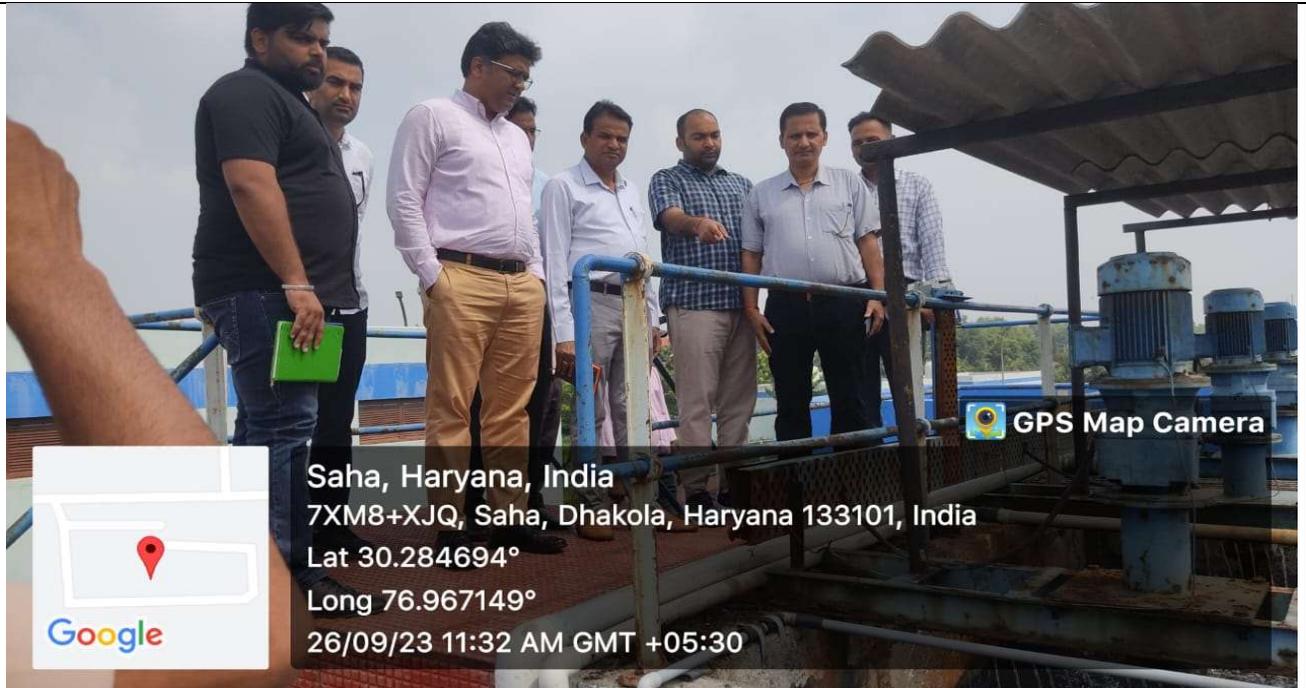
Dr. Vimal Kumar Hatwal,
Scientist-E, MoEF & CC
RO, Chandigarh

Dated: October 17, 2023.

❖ Photographs of field visits conducted by the joint committee :

Phase-A: Site Photographs of monitoring carried out by the Team on dated 25.09.2023 & 26.09.2023









G69W+2RF, Mogi Nand, Dewni, Himachal Pradesh 173001, India

Latitude
30.51683313°

Longitude
77.24632343°

Local 01:12:53 PM
GMT 07:42:53 AM

Altitude 370 meters
Sunday, 08.10.2023





Sampling of River Markanda D/s Rampur Jattan drain at Moginand , Kala amb H.P.





I/233769/2023



HARYANA STATE POLLUTION CONTROL BOARD

**C-11, SECTOR-6, PANCHKULA
Ph-0172-577870-73, Fax No. 2581201
E-mail: hspcbwatercell@gmail.com**



HSPCB

Dated: 11-10-2023

To

1. Chief Administrator, HSVP, Panchkula
2. MD, HSIIDC, Panchkula
3. Director, Urban Local Bodies Department, Panchkula.
4. EIC, Public Health Engineering Department, Panchkula.
5. EIC, Irrigation & Water Resources Department, Panchkula
6. Chief Engineer, Development & Panchayat Department, Panchkula.
7. Regional Officer, Kurukshetra
8. Regional Officer, Kaithal
9. Regional Officer, Ambala
10. Regional Officer, Panchkula

Sub: Proceedings of the meeting regarding pollution issues in River Markanda - NGT matter of O.A No. 515/2022 titled as Dharamvir V/s State of Haryana & Anr held on 04.10.2023 at 11:00 AM under the Chairmanship of Sh. P. Raghavendra Rao, Chairman, HSPCB.

Kindly refer to the subject noted above.

In this connection, I have been directed to enclose herewith the copy of minutes of meeting held under the Chairmanship of Sh. P. Raghavendra Rao, Chairman, HSPCB at 11:00 AM on 04.10.2023 in Conference Room, Haryana State Pollution Control Board, C-11, Sector-06, Panchkula regarding pollution issues in River Markanda - NGT matter of O.A No. 515/2022 titled as Dharamvir V/s State of Haryana & Anr for information and compliance, please.

DA/As above


**Env. Engineer (HQ)
For Chairma**

Endst No.

Dated: 11-10-2023

A copy of the above is forwarded to the following for information, please:-

1. Dr. Babu Ram, Technical Expert, HSPCB
2. Chief Environmental Engineer-II, HSPCB
3. Sr. Env. Engineer, Water Cell, HSPCB


**Env. Engineer (HQ)
For Chairman**

I/233769/2023

Endst No.**Dated:11-10-2023**

A copy of the above is forwarded to the following for information, please:-

1. PS to ACS, Environment Department, Govt. of Haryana
2. PS to Chairman, HSPCB
3. PA to Member Secretary, HSPCB



**Env. Engineer (HQ)
For Chairman**

I/233647/2023

Minutes of the meeting held on 4.10.2023 at 11:00 AM under the Chairmanship of Sh. P. Raghavendra Rao, Chairman, Haryana State Pollution Control Board at the Conference Room, C-11, Sector-6, Panchkula regarding pollution in river Markanda as mentioned in OA no. 515 of 2022 in the matter of Dharamvir Vs State of Haryana and Ors.

The list of the participants present in the meeting is at **Annexure-1**.

At the outset, the Chairman, Haryana State Pollution Control Board welcomed the officers/participants present in the meeting and apprised that a complaint dated 23.04.2022 about pollution in the Holy River Markanda has been lodged before the Hon'ble NGT by Sh. Dharamvir of Naraingarh, District Ambala, wherein, the applicant has raised the issues stating that polluted industrial wastewater coming from factories located at Kala Amb, Trilokpur road, Himachal Pradesh is being discharged into River Markanda and further polluting the River Ghaggar.

Thereafter, the Chairman, HSPCB directed the Regional Officer, Ambala to present the details of the case. The Regional Officer, Ambala informed that the Hon'ble National Green Tribunal considered the matter on 1.9.2022 and constituted a joint committee comprising of Administrative Secretaries of Jal Shakti, Environment & Industry Departments, State PCBs and Deputy Commissioners of Nahan, Ambala and Kurukshetra districts. The joint committee submitted its report to the Hon'ble National Green Tribunal on 23.11.2022, which was considered by the Hon'ble Tribunal on 24.11.2022, wherein, the Hon'ble Tribunal sought the response from the Chief Secretaries, Administrative Secretaries of Jal Shakti Department of both the States, CPCB, State PCBs and Deputy Commissioners of Sirmour, Ambala and Kurukshetra. The response on the behalf of the said authorities was filed by the Deputy Commissioner Ambala, Executive Engineer, Water Services, Ambala and the Regional Officer, Ambala on 13.3.2023 and the same was considered by the Hon'ble Tribunal on 14.3.2023, wherein, another Joint Committee consisting of representatives of MoEF & CC, New Delhi, CPCB, Administrative Secretaries of Department of Jal Shakti, Department of Environment, Department of Industry of both the States, State PCBs, Deputy Commissioners of Nahan, Ambala and Kurukshetra. The joint committee was directed to readdress the following issues and submit reports within 03 months.

- a. *Regarding notification of the Flood Plain Zone (FPZ) of River Markanda available if any*
- b. *Encroachments made if any and action taken for removal thereof*
- c. *Discharge of untreated domestic sewage or industrial effluent in to River Markanda*
- d. *Operational efficacy of STPs/ETPs/CETPs already setup*

I/233647/2023

- e. *Proposals for setting up of new STPs/ETPs/CETPs if any*
- f. *Dredging of the River/Drain required, if any.*
- g. *Rejuvenation/remedial measures required, if any.*
- h. *The Joint Committee shall also arrange collection of samples of water from different strategic locations (outfall of STPs/ETPs/CETPs) and at the interval of 1 KM of drain/River and analysis of the same with respect to all relevant parameters including presence of heavy metals.*

The Joint Committee was further directed to send copies of its report to the concerned authorities with specific suggestion and concerned PCB to take appropriate steps by way of issuing notices/orders in terms of recommendations of the Joint Committee to comply with the same in a time bound manner and submit action taken report/action taken plan with specific timelines and budgetary provisions. State PCBs were termed as nodal agencies in the matter. The Joint Committee held its meeting on 12.6.2023 and the following decisions were taken in the said meeting:

- a. The route map of drains in the catchment of River Markanda (from Kala Amb, Himachal Pradesh to final merger into River Ghaggar at Shahabad, Haryana) shall be shared with CPCB by both PCBs of States of Himachal Pradesh and Haryana after obtaining from Irrigation Department within 1 week so that sampling schedule can be prepared accordingly.
- b. List of water polluting industries in the catchment of River Markanda (from Kala Amb of Himachal Pradesh to final merger at Shahabad, Haryana) shall be shared with both the State Boards and CPCB.
- c. Sampling shall be carried out within 2 weeks after receiving route map of drains and results of sampling shall be available within 5 weeks.
- d. CPCB will prepare and share the monthly progress format with all stakeholders.
- e. The Joint Committee shall request Hon'ble NGT to give time extension for 06 Months to submit its final report. Monthly progress report shall be submitted to Hon'ble NGT.

Based on the suggestions/recommendations/decisions of the Joint Committee, State PCBs submitted their report to the Hon'ble Tribunal on 17.7.2023, which was considered by the Hon'ble Tribunal on 18.7.2023 and directed in Para no. 5 of order dated 18.7.2023, which is reproduced as under.

Para no. 5

In reply dated 17.07.2023 thereof, State PCB has sought six months' time to submit a complete report. The State PCBs of HP and Haryana are directed to clearly indicate quantity of sewage and industrial effluents being discharged into river Markanda directly or indirectly through drains and take necessary steps and to ensure that there shall not be untreated discharge of waste water (sewage and industrial) into the water body or river and covering earlier observations on flood plain zone and encroachments and submit a

I/233647/2023

report within three months from today.”

Now the case, has been adjourned to 18.10.2023.

Thereafter, the progress with reference to operational status of existing STPs of 12 towns of 04 Districts (Panchkula, Ambala, Kurukshetra and Kaithal), upgradation of non complying STPs, status of STPs under construction, STPs of Rural area, status of sewerage network in 12 towns, diversion of untreated sewage in the unapproved areas, status of CETPs, septage management, utilization of treated sewage for irrigation was discussed. The department-wise information/interventions required in terms of past directions issued by the Hon'ble National Green Tribunal was also discussed and the following decisions were taken:

i. The Department of Irrigation and Water Resources, Haryana shall submit the following details (for the district Ambala, Panchkula, Kurukshetra and Kaithal) by 09.10.2023.

- a. The Route Map of River Markanda and its constituent drains and tributary rivers in the catchment of River Markanda of the respective District (covering its entry point at Kala Amb, Himachal Pradesh to final merger into River Ghaggar at Kaithal, Haryana) so that sampling schedule can be prepared by the CPCB accordingly.
- b. Details regarding notification of the Flood Plain Zone (FPZ) of River Markanda, if any.
- c. Details of encroachments made, if any and action taken for removal thereof on River Markanda in the respective District (covering its entry point in to the State to final merger into River Ghaggar at Kaithal, Haryana).
- d. Quantification of discharge points of untreated sewage/ industrial effluent going directly or indirectly into river Markanda or into its tributaries of the respective District (covering from entry point of River Markanda at Kala Amb, Himachal Pradesh to its final merger into River Ghaggar at Kaithal, Haryana) with details of quantum and locations of such sub drains/ nallah/Rivulets in the following proforma:

Sr. no.	Name of drain/ Nallah carrying untreated effluent	Location of drain/ Nallah With GPS coordinates	Starting point of drain/ Nallah/ Rivulets	Final merging point into River/Drain	Quantum of discharge (in MLD)	Source of generation of untreated effluent	Action taken/ proposal for Tapping

- e. Dredging/De-silting done and required, if any, of the River Markanda or its constituent drains/rivers.
- f. Rejuvenation/remedial measures required if any of the River Markanda.

ii. The Department of Public Health Engineering Department, Haryana shall submit the following details (For the districts of Panchkula, Ambala, Kurukshetra and Kaithal) by 09.10.2023:-

- a. Quantification of discharge points of untreated sewage effluent going directly or indirectly into river Markanda or into its tributaries of the respective District (Covering from entry point of River Markanda at Kala Amb, Himachal Pradesh to its final merger into River Ghaggar at Kaithal, Haryana)with details of quantum and locations of such sub drains/ nallah/Rivulets in the following proforma:

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I/233647/2023

Sr. No.	Name of drain/ Nallah carrying untreated effluent	Location of drain/ Nallah With GPS coordinates	Starting point of drain/ Nallah/ Rivulets	Final merging point into River/Drain	Quantum of discharge (in MLD)	Source of generation of untreated effluent	Action taken/ proposal for Tapping

b. Operational efficacy of STPs already setup by PHED in the district in the following proforma:-

Sr. No.	Name & address of STP	Latest Compliance status w.r.t discharge standards fixed vide HSPCB policy dated 02.07.2020	Installed Capacity (in MLD)	Avg. Quantum of discharge received at inlet (in MLD)	Treatment technology (MBBR/ SBR/UASB/ others)	Quantum of discharge at outlet (in MLD)	Terminal mode of Discharge into River/ Drain	Action taken/ proposal for Re-use/ Recycling

c. Progress of under construction STPs.

d. Proposals for setting up of new STPs if any by PHED in the district in the following proforma:-

Sr. No.	Name & Address of STP proposed	Estimated Date of Commissioning	Capacity (in MLD)	Avg. Quantum of discharge to be received at inlet (in MLD)	Source of effluent will be received/ area/ drain of Tapping	Treatment technology (MBBR/ SBR/UASB/ others)
1.						

The Department of Urban Local Bodies, Haryana shall submit the following details (For the districts of Panchkula, Ambala, Kurukshetra and Kaithal) by 09.10.2023:-

a. Quantification of discharge points of untreated sewage effluent going directly or indirectly into river Markanda or its tributaries of the respective District (Covering from entry point of River Markanda at Kala Amb, Himachal Pradesh to its final merger into River Ghaggar at Kaithal, Haryana) from the MC area with details of quantum and locations of such sub drains/ nallah/Rivulets in the following proforma:

Sr. no.	Name of drain/ Nallah carrying untreated effluent	Location of drain/ Nallah With GPS coordinates	Starting point of drain/ Nallah/ Rivulets	Final merging point into River/Drain	Quantum of discharge (in MLD)	Source of generation of untreated effluent	Action Taken/ proposal for Tapping

b. Operational efficacy of STPs already setup by MC/ ULBD in the MC area of district in the following proforma:-

Sr. No.	Name & address of STP	Latest Compliance status w.r.t discharge standards fixed vide HSPCB policy	Installed Capacity (in MLD)	Avg. Quantum of discharge received at inlet (in MLD)	Treatment technology (MBBR/ SBR/UASB/ others)	Quantum of discharge at outlet (in MLD)	Terminal mode of Discharge into River/ Drain	Action taken/ proposal for Re-use/ Recycling

I/233647/2023

		dated 02.07.2020						

c. Progress of under construction STPs.

d. Proposals for setting up of new STPs if any by MC/ ULBD in the MC area of in the district in the following proforma:-

Sr. No.	Name & address of STP proposed	Estimated date of commissioning	Capacity (in MLD)	Avg. Quantum of discharge to be received at inlet (in MLD)	Source of effluent will be received/ area/ drain of Tapping	Treatment technology (MBBR/ SBR/UASB/ others)

iv. **Haryana State Industrial & Infrastructure Development Corporation shall submit the following details (For the Districts of Panchkula, Ambala, Kurukshetra and Kaithal) by 09.10.2023:-**

a. Quantification of discharge points of untreated industrial effluent going directly or indirectly into river Markanda or into its tributaries of the respective District (Covering from entry point of River Markanda at Kala Amb, Himachal Pradesh to its final merger into River Ghaggar at Kaithal, Haryana) from the Industrial Estates of HSIIDC with details of quantum and locations of such sub drains/ nallah/Rivulets in the following proforma:

Sr. no.	Name of drain/ Nallah carrying untreated effluent	Location of drain/ Nallah With GPS coordinates	Starting point of drain/ Nallah/ Rivulets	Final merging point into River/Drain	Quantum of discharge (in MLD)	Source of generation of untreated effluent	Action Taken/ proposal for Tapping

b. Operational efficacy of CETPs already setup by the HSIIDC in the District in the following proforma:-

Sr. No.	Name & address of CETP	Latest Compliance status w.r.t discharge standards fixed vide MoEF& CC Notification dated 01.01.2016	Installed Capacity (in MLD)	Avg. Quantum of discharge received at inlet (in MLD)	Treatment technology	Quantum of discharge at outlet (in MLD)	Terminal mode of Discharge into River/ Drain	Action taken/ proposal for Re-use/ Recycling

c. Progress of under construction CETPs.

d. Proposals for setting up of new CETPs if any by HSIIDC in the District in the following proforma:-

Sr. No.	Name & address of CETP proposed	Estimated date of commissioning	Capacity (in MLD)	Avg. Quantum of discharge to be received at inlet (in MLD)	Source of effluent will be received from Industrial Estate/ drain of Tapping

v. **The Development & Panchayats Department, Haryana shall submit**

I/233647/2023

the following details (For the districts of Panchkula, Ambala, Kurukshetra and Kaithal) by 09.10.2023:-

- a. Quantification of discharge points of untreated sewage effluent going directly or indirectly into river Markanda or into its tributaries of the respective District (Covering from entry point of River Markanda at Kala Amb, Himachal Pradesh to its final merger into River Ghaggar at Kaithal, Haryana) from the villages situated at the bank of River Markanda or its other tributaries with details of quantum and locations of such sub drains/ nallah/Rivulets in the following proforma:

Sr. no.	Name of drain/ Nallah carrying untreated effluent	Location of drain/ Nallah With GPS coordinates	Starting point of drain/ Nallah/ Rivulets	Final merging point into River/Drain	Quantum of discharge (in MLD)	Source of generation of untreated effluent	Action Taken/ proposal for Tapping

- b. Operational efficacy of STPs already setup by Panchayati Raj, Department in the District in the following proforma:-

Sr. No.	Name & address of STP	Latest Compliance status w.r.t discharge standards fixed vide HSPCB policy dated 02.07.2020	Installed Capacity (in MLD)	Avg. Quantum of discharge received at inlet (in MLD)	Treatment technology (MBBR/ SBR/UASB/ 3-5 Pond Seenchewal model)	Quantum of discharge at outlet (in MLD)	Terminal mode of Discharge into River/ Drain	Action taken/ proposal for Re-use/ Recycling
1.								

- c. Progress of under construction STPs.
d. Proposals for setting up of new STPs if any by Panchayati Raj, Department in the District in the following proforma:-

Sr. No.	Name & address of STP proposed	Estimated date of commissioning	Capacity (in MLD)	Avg. Quantum of discharge to be received at inlet (in MLD)	Source of effluent will be received from the village /drain of Tapping	Treatment technology (MBBR/ SBR/UASB/ 3-5 Pond Seenchewala model)

- vi. **Haryana Shahari Vikas Pradhikaran, Haryana shall submit the following details (For the districts of Panchkula, Ambala, Kurukshetra and Kaithal) by 09.10.2023:-**

- a. Quantification of discharge points of untreated sewage effluent going directly or indirectly into River Markanda or into its tributaries of the respective District (Covering from entry point of River Markanda at Kala Amb, Himachal Pradesh to its final merger into River Ghaggar at Kaithal, Haryana) from the Residential Estates/ Sectors of HSVP with details of quantum and locations of such sub drains/ nallah/Rivulets in the following proforma:-

Sr. no.	Name of drain/ Nallah carrying	Location of drain/ Nallah With GPS	Starting point of drain/	Final merging point into River/Drain	Quantum of discharge (in MLD)	Source of generation of untreated	Action Taken/ proposal for Tapping

I/233647/2023

	untreated effluent	coordinates	Nallah/Rivulets			effluent	
1.							

b. Operational efficacy of STPs already setup by HSVP in the District in the following proforma:-

Sr. No.	Name & address of STP	Latest Compliance status w.r.t discharge standards fixed vide HSPCB policy dated 02.07.2020	Installed Capacity (in MLD)	Avg. Quantum of discharge received at inlet (in MLD)	Treatment technology (MBBR/SBR/UASB/others)	Quantum of discharge at outlet (in MLD)	Terminal mode of Discharge into River/Drain	Action taken/proposal for Re-use/Recycling
1.								

c. Progress of under construction STPs.

d. Proposals for setting up of new STPs if any by HSVP in the District in the following proforma:-

Sr. No.	Name & address of STP proposed	Estimated date of Commissioning	Capacity (in MLD)	Avg. Quantum of discharge to be received at inlet (in MLD)	Source of effluent will be received/ area/ drain of Tapping	Treatment technology (MBBR/SBR/UASB/others)
1.						

-

vii. **Regional Officers of HSPCB shall submit the following details (For the districts of Ambala, Panchkula, Kurukshetra and Kaithal) by 09.10.2023:-**

- List of water polluting industries with mode of their disposal of domestic and industrial effluent in the catchment of River Markanda or its other tributaries (Starting from entry point of River Markanda at Kala Amb, Himachal Pradesh to its final merger into River Ghaggar at Kaithal, Haryana) within a radius of 5 KM of catchment area (proforma shall be provided/ may be asked separately).
 - Irrigation Management Plan (IMP) of these Industries discharging treated effluent on to land for irrigation/plantations, so as to verify is the effluent is being discharges as per Guidelines prepared by CPCB under the directions of Hon'ble NGT.
 - Operational efficacy of standalone STPs/ ETPs/ CETPs already setup and new proposals for setting up of STPs/ ETPs/ CETPs in the district Ambala, Panchkula, Kurukshetra and Kaithal.
- viii. **Regional Officer, Ambala will be the coordinator for this matter. The reply/report in the matter shall be prepared jointly by the Water Cell, HSPCB and the Regional Officers of Panchkula, Ambala, Kurukshetra and Kaithal, by 10.10.2023 and the same may be filed before the Hon'ble Tribunal by 13.10.2023, after due vetting.**
- Regional Officer, Ambala and Officers of Irrigation Department, Ambala will jointly monitor the flow and quality of effluent coming from Jattan Walla Nallah daily for the next 10 days.**
 - Development and Panchayats Department will check the domestic discharge of Kala Amb area falling in Haryana and nearby villages of**

I/233647/2023

Haryana and check the feasibility of providing 3/5 pond system in the area and to submit detailed action plan and timelines in this regard.

Other decisions taken regarding River Action Plan:-

- i. **PHED, HSVP and ULBD will check monthly growth in number of sewer connections provided to households in the whole State and report the same in MPR of Rivers Action Plan to the HSPCB regularly.**
- ii. **PHED, HSVP and ULBD to provide the latest data as per present population regarding quantity of sewage generation in towns, treatment capacity that exists, actual discharge reaching STPs and the Gap in treatment capacity of sewage for the whole State of Haryana.**

The meeting up ended with a vote of thanks to Chair and all the participants.

List of participants of meeting to be held on 04.10.2023 at 11:00 AM under the Chairmanship of Sh. P. Raghavendra Rao, Chairman, Haryana State Pollution Control Board at HSPCB at Conference Room, C-11, Sector-6, Panchkula regarding pollution issues in River Markanda - NGT matter of O.A No. 515/2022 titled as Dharamvir V/s State of Haryana &Anr.

Sr. No.	Name and Designation	Mobile No.	E-mail	Sign
1.)	AMIT RATHEE EE(M) HSVP	9711880411	cencrhuda@gmail.com	
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11	Ranbir Singh XEN, USB	9466940008		
12.	Sudhar mohan, RO, KLE	7986423511		
13.	Nitish Chandel, SDO, Irrigation Karnal	9779600113		
14	RAHIL SAINI, SDO, Irrigation DPH. KURUKSHETRA	9466894340		
15	Vikram Kataria JEE HSPCB	9416527770	hspcb2010@gmail.com	
16.	RAKESH JEE (P. Res)	9416251703		
17.	J.P. Singh SEE HSPCB			

388
HIMACHAL PRADESH
JAL SHAKTI VIBHAG

Annexure-B

No: -JSV-JSCN-WA-(Nahan) NGT/2022- 10/21 -26

Dated:- 4/10/2023

To

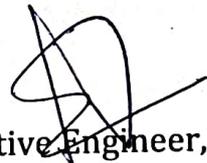
✓ The Regional Officer,
HPSPCB, RO, Paonta Sahib.

Subject: - OA No. 515/2022 Dharamvir V/S State of Haryana.
Reference:- Your office letter No. 1865-67 dated 29.9.2023.

With reference to your office letter referred above, it is intimated that during the Common Facility Centre (CFC) meeting held on dated 12.6.2023 at KalaAmb it has already been conveyed by the undersigned that no data regarding flood plan zone is available with JSV neither it is the custodian of such records. This matter was also discussed during joint inspection held on dated 25.9.2023 in which the same has been intimated.

However, this department had finalized a DPR on Channelization of Marakanda river in year 2020 which has been sent for approval of the Government. In this DPR, CWPRS has done Mathematical Model Study and provided final report in the year 2020 after collecting field data. Hence, whatever data/ information prepared during its preparation is enclosed herewith for further necessary action please.

DA:-Data from CWPRS
Technical report No.5847
of August 2020

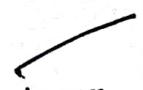

Executive Engineer,
Jal Shakti Division Nahan

Copy to the Deputy Commissioner, Sirmour at Nahan for information please.

Copy to the Superintending Engineer, Jal Shakti Circle Nahan for information please. It is with reference to your office endorsement No. 6252 dated 3.10.2023.

Copy to the Member Secretary, HPSPCB, Head Office Shimla for information please.

Copy to the Assistant Engineer, Jal Shakti Sub-Division Nahan for information and necessary action.


Executive Engineer,
Jal Shakti Division Nahan.

REVISED MATHEMATICAL MODEL STUDIES FOR FLOOD PROTECTION MEASURES OF RIVER MARKANDA FROM RUKHRI TO KALA AMB IN TEHSIL NAHAN, DISTRICT SIRMOUR, HIMACHAL PRADESH

1.0 INTRODUCTION

Markanda River is a main tributary of Ghaggar River. It originates in the Shivalik hills on the border of Haryana and Himachal Pradesh and flows westward through Haryana and finally joins River Ghaggar from right side of the outer circuit of Cheeka town in Kaithal district. During rainy season, heavy floods in Markanda River damage the agricultural lands and properties of the farmers. Due to change in rainfall pattern, the intensity of flood has aggravated resulting in immense damage to the life, crops and property. Index map of river Markanda is shown in Figure 1.

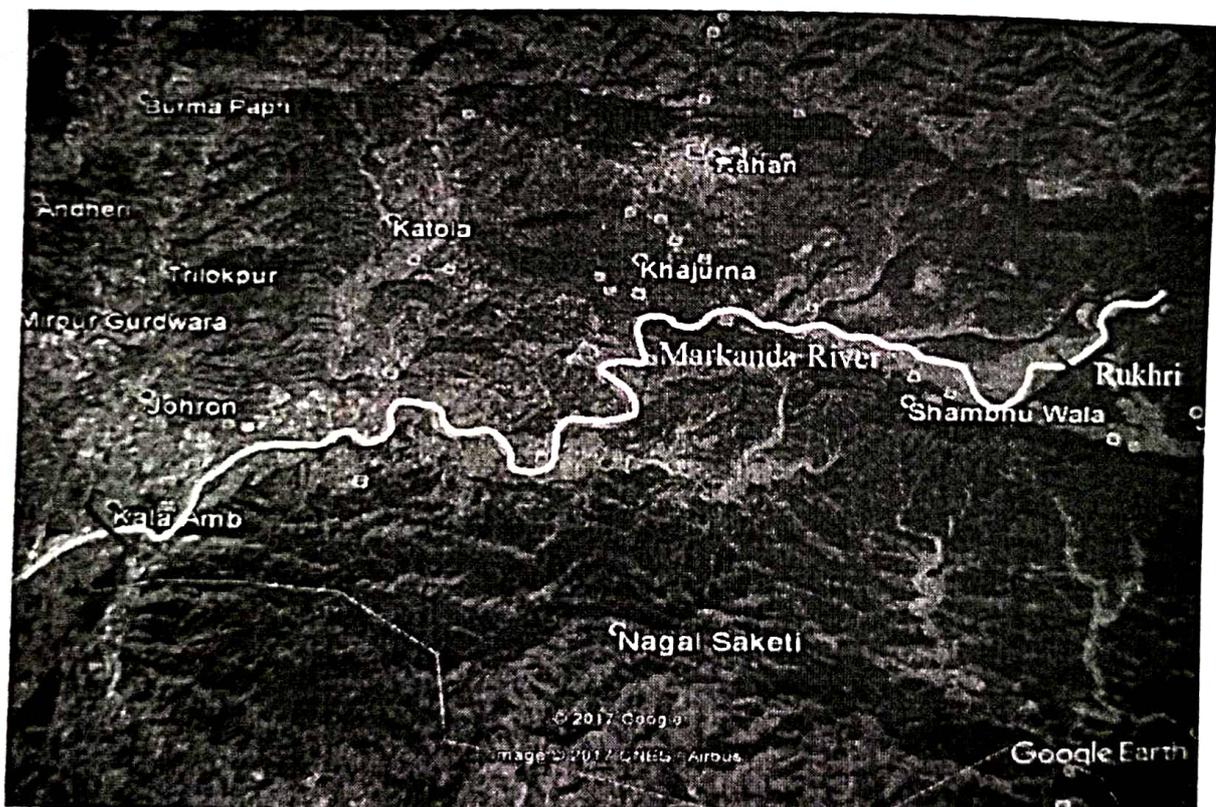


Figure 1: Index map of River Markanda

The studies were conducted for the given cross sections of River Markanda and for the 25 return period flood earlier. Based on this study a technical report No. 5614 of August 2018 was submitted to the project authorities in 2018. While the DPR prepared based on this report was submitted to CWC, it was returned for want of studies to be extended for 25, 50 and 100 year return period floods. In the meantime, it was suggested that the flood discharges in Markanda and its tributaries were available with the project authorities and the same may be utilized for the studies. The distribution of flood discharges along the river

Revised mathematical model studies for flood protection measures of River Markanda in tehsil Nahan, district. Sirmour, Himachal Pradesh.

Markanda and its tributaries were submitted by the project authorities along with modified latest cross sections data for the revised studies.

This report contains the results of the study with revised input discharges along with latest cross sections data of River Markanda.

2.0 TERMS OF REFERENCE

- To evaluate the necessity of protection works proposed by the project authority from Rukhri to Kala Amb and their effect on the river flow.
- Based on the analysis, the alignment of protection works on anyone or both the banks of River Markanda would be decided, by leaving a suitable waterway for the river flow.
- Based on the results obtained from mathematical model, suitable river training works would be proposed.

3.0 THE DATA

Following data were supplied by the project authority.

3.1 Survey Data:

- (i) Index plan of River Markanda covering the project reach of about 20.5 km from Rukhri to Kala Amb.
- (ii) Revised cross sections of River Markanda at 100 m interval covering the project reach from Rukhri to Kala Amb (20.5 km).
- (iii) Cross section data of 8 important tributaries meeting River Markanda, at an interval of 500 m up to a distance of 500 m to 2000 m length from the confluence point.

3.2 Hydrological Data

- i. Gauge-discharge data observed at RD. 200 m, RD. 9400 m and RD. 20250 m.
- ii. Cumulative discharges of River Markanda from Rukhri to Kala Amb, as reproduced in Figs. 2(a), (b) and (c).

4.0 MATHEMATICAL MODEL STUDIES

The HEC-RAS model was developed by inputting latest geometrical cross sections data of river Markanda and its tributaries as they presently exist (existing conditions) submitted by the project authority. The various boundary conditions were set as per the available hydraulic conditions. The proving studies were conducted to adjust the Manning's "n" values and other



parameters so that the given observed data and the results of the mathematical model match well. Further the flood discharges of 25, 50 and 100 years return period are input to simulate the respective existing flow conditions in the Khads. The various parameters obtained by model studies are used to suggest/design the protection works on river side along the embankments/ banks.

The input discharges for the River Markanda and its tributaries for return period of 25, 50 and 100 years as submitted by the project authorities are presented in Figures 2 (a, b and c).

4.1 HEC-RAS model

HEC-RAS is an integrated package of hydraulic analysis programs, in which the user interacts with the system through the use of a Graphical User Interface (GUI). The system is capable of performing steady and unsteady flow water surface profile calculations, and will include sediment transport and several hydraulic design computations.

4.2 Reach simulated in mathematical model

The Markanda River reach of length 20.5 km from Rukhri to Kala Amb was simulated in HEC-RAS model using 103 river cross sections. The schematic diagram of River Markanda and its tributaries along with discharges is presented in Figures 2(a), 2(b) and 2(c). Eight (8) tributaries joining the River Markanda in this reach were also simulated in the same model using the relevant cross sections data upto some distance (500 m to 2000 m) to take care of protection works needed in the adjacent reaches and transitions geometry at the confluence. The discharge data of the tributaries were used as point discharges at these nodes represented by the river confluence.

4.3 Boundary conditions

The 1 in 50 year return period flood for River Markanda and its tributaries was taken for proving studies as the observed gauge discharge data was submitted for this discharge at few locations along the Khad. The downstream boundary was taken as normal depth and known water surface elevation at RD 20500 m near the end of the reach.

5.0 PROVING STUDIES AND STUDIES FOR EXISTING CONDITION

Proving studies were carried out for the existing conditions of river cross sections. The existing cross sections of River Markanda and the tributaries were reproduced in the mathematical model as per the data supplied by the project authorities. The cumulative



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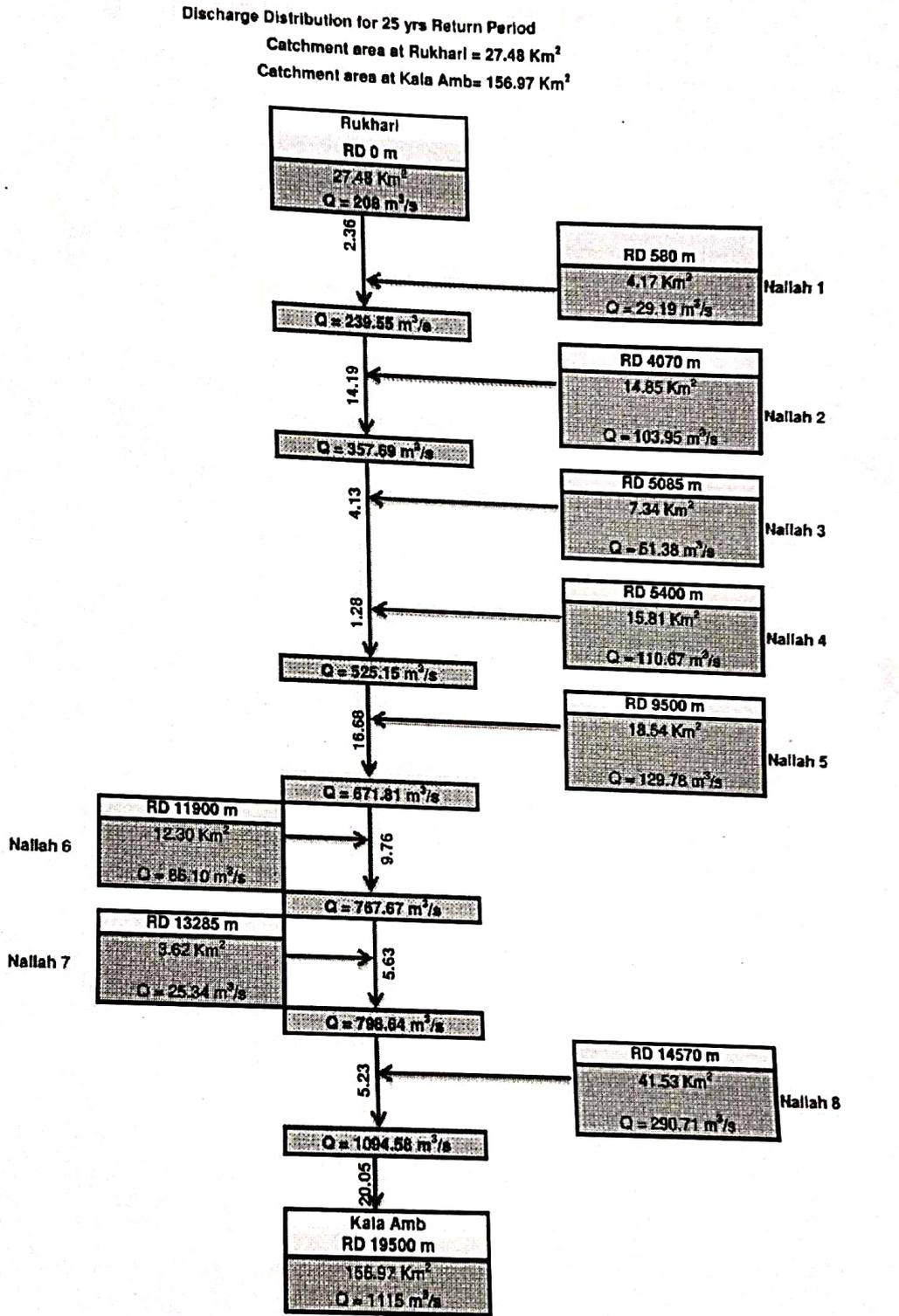


Figure 2(a): Schematic diagram of discharge distribution of River Markanda and its tributaries for 25 years return flood



Revised mathematical model studies for flood protection measures of River Markanda in tehsil Nahan, district. Sirmour, Himachal Pradesh.

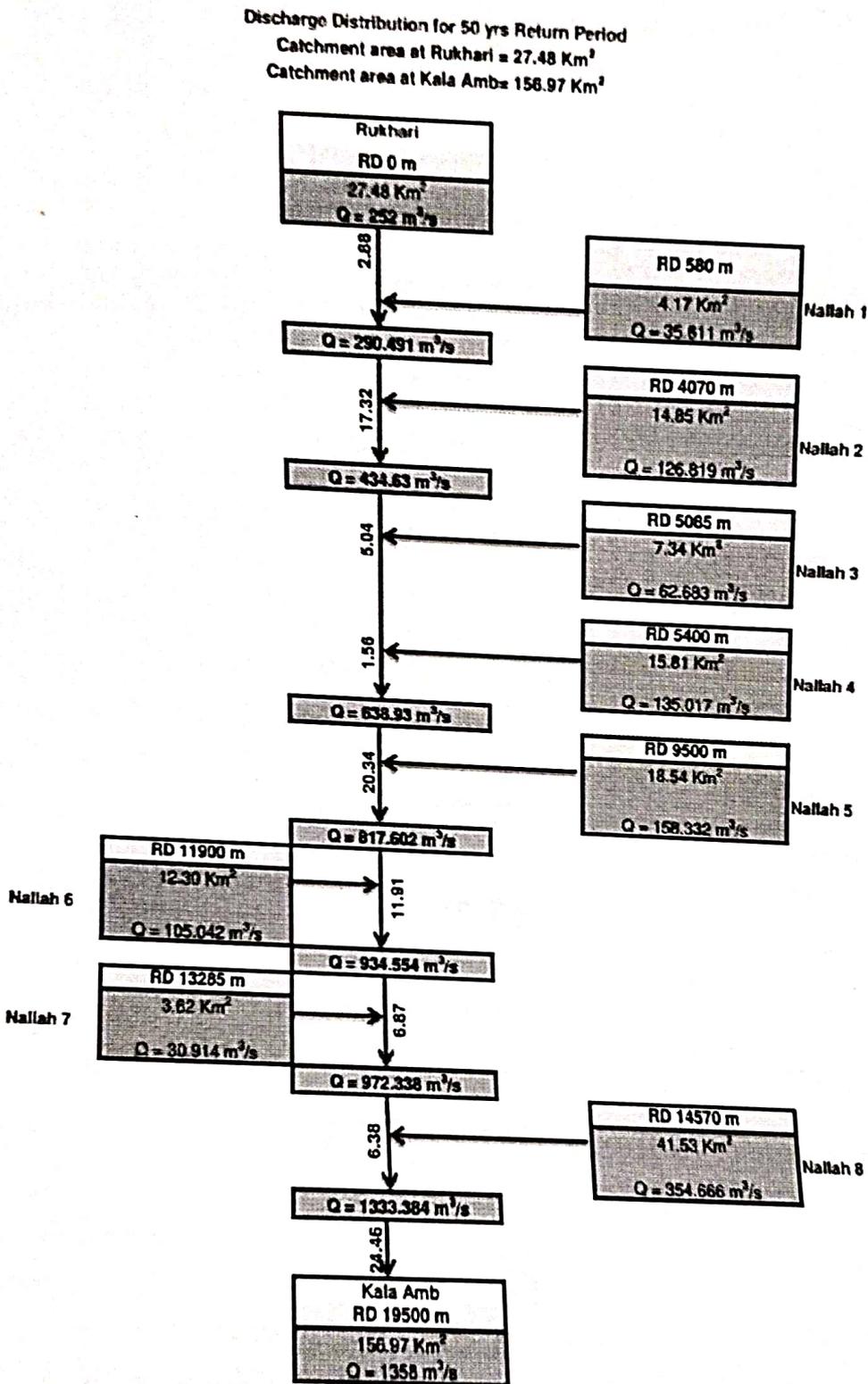


Figure 2(b): Schematic diagram of discharge distribution of River Markanda and its tributaries for 50 years return flood



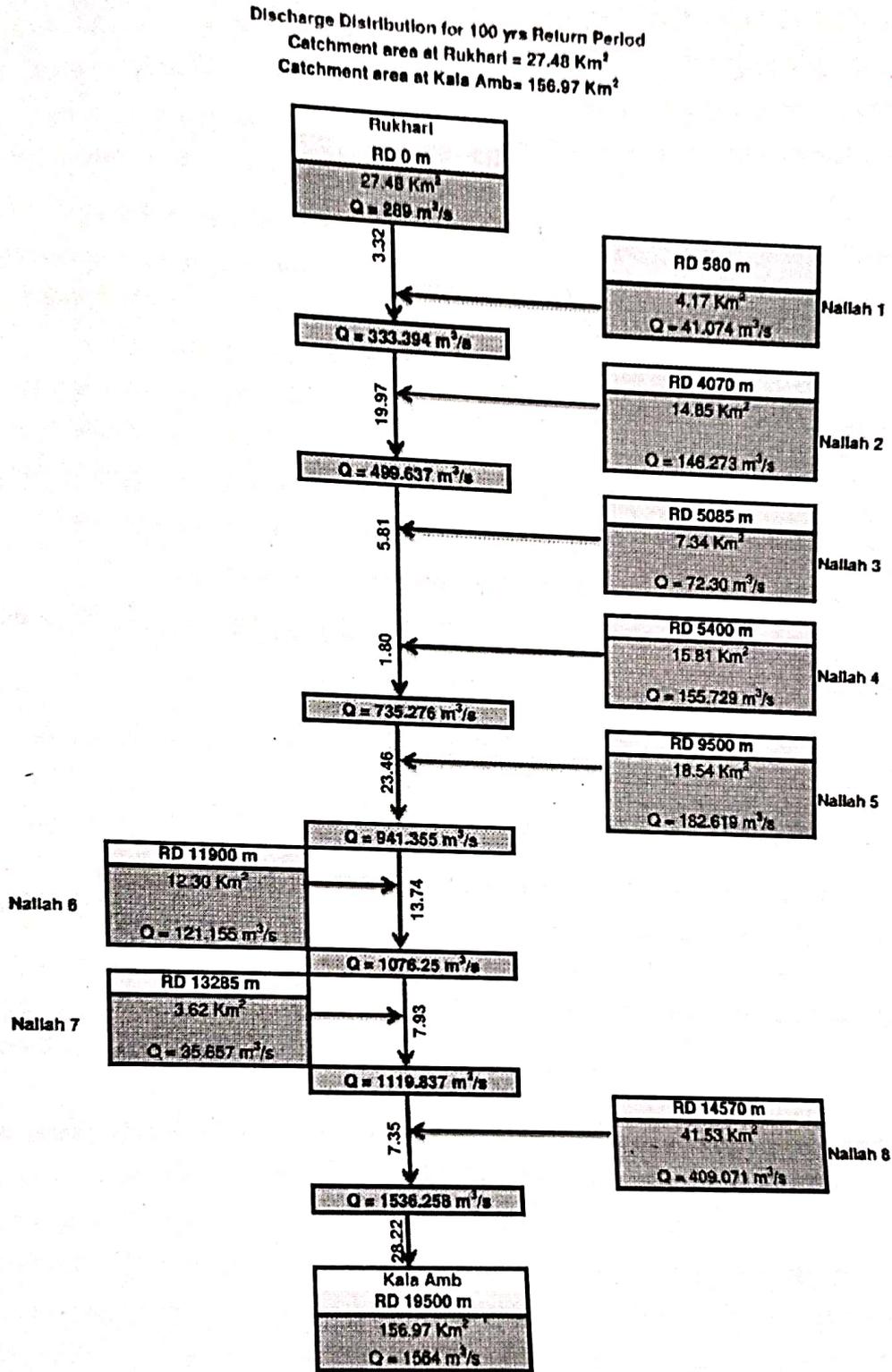


Figure 2(c): Schematic diagram of discharge distribution of River Markanda and its tributaries for 100 years return flood



Revised mathematical model studies for flood protection measures of River Markanda in tehsil Nahan, district. Sirmour, Himachal Pradesh.

Discharges for 50 year return period of the River Markanda from the starting reach to end reach were used as a flow data for model studies as shown in Figure 2(b). Boundary conditions were taken as normal depth and known water surface elevation at RD 20500 m at almost end of the reach under consideration. Proving studies of model were carried out with the varying manning's 'n' value.

The proving studies were conducted by comparing the results of the mathematical model studies with the gauge-discharge data supplied by the project authorities at RD 200 m, RD 9400 m and RD 20250 m. The mathematical model was run by varying the manning's 'n' and the value of 'n' for which the water level matched well with the measured gauge data was selected for further studies. The water levels obtained from the mathematical model along the River Markanda using manning's 'n' value of 0.04 are in close agreement with data supplied by the project authorities as shown in Table 1. In view of this, it is considered that the manning's 'n' value of 0.04 will give near accurate results.

Table 1. Comparison of water levels for manning's n value of 0.04

S.No.	Location	Discharge in m^3/s	Observed water level (m) for 50 yr return period	Computed water level (m) for n = 0.04 (50 yr period)
1.	200	252	502.3	502.26
2.	9400	638.93	410.95	411
3.	20250	1358	338.56	338.5

To understand the effect of the insertion of any embankment or such structure that may change the flow conditions, initially model studies for existing condition were conducted for various return period floods of 1 in 25 yrs, 1 in 50 yrs and 1 in 100 yrs. The computed water levels for existing condition along Markanda River from Rukhri to Kala Amb are presented in Table 3.

The project authorities had decided necessity of the flood protection works based their experience and had sent the same to CWPRS. As the studies progressed, the velocity, discharge intensity and modifications to the protection works needed were sent to the project authorities vide the draft report. The project authorities were advised about the type of protection works like sloping rip rap protection works and its applications cum limitations and application of vertical gabion wall protection works etc. Depending on previous flood data, local river geometry observed by the project authorities, details of mathematical model study results given by CWPRS and the guidance given while this report was sent to project authorities as draft, project authorities studied the draft report vis a vis requirement at site for protection works to suit/adopt and final proposal were sent to CWPRS for fine tuning. The same are presented in Table 2. These final modified flood protection proposals include only



the bank protection works and have no provision of embankments that modify/constrict the river water way. Hence, the water levels in the khads will not change and will remain same as in the existing conditions as given in Table 3. It is recommended to use the velocity and discharge intensities as given in Table 3 for the selection and design of protection works.

Table 2. Details of protection works on River Markanda from Rukhri to Kala Amb as proposed by project authority

Protection works on left bank				
Sr. No.	RD (m) on left bank		Length in 'm'	Type of protection works
	From	To		
1	5400	5700	300	Sloping bank
2	12800	13800	1000	Sloping bank
3	19200	19500	300	Sloping bank / Gabion wall
Total			1600	
1	13900	14100	200	Sloping bank
2	14500	15100	600	Sloping bank
3	16100	16400	300	Sloping bank
Total			1100	Sloping bank
Protection works on right bank				
Sr. No.	RD (m) on right bank		Length in 'm'	Type of protection works
	From	To		
1	0	200	200	Sloping bank
2	11400	12000	600	Sloping bank
3	12600	12700	100	Sloping bank
Total			900	Sloping bank
1	19600	20000	400	Sloping bank/Gabion wall
Protection works on both bank				
Sr. No.	RD on both bank		Length in 'm'	Type of protection works
1	5500	5600	100 x 2 = 200	Sloping bank
2	5800	6300	500 x 2 = 1000	Sloping bank
3	16500	19100	2600 x 2 = 5200	Sloping bank / Gabion wall
Total			6400	

Revised mathematical model studies for flood protection measures of River Markanda in tehsil Nahan, district Sirmour, Himachal Pradesh

Table 3. Maximum velocities and discharge intensity of flow in River Markanda from chainage 0 to 20500 m for existing and with embankments as proposed by project authorities for 25, 50 and 100 year return period flood

RD in 'm'	Bed level in 'm'	Existing condition						Depth in 'm'			Discharge intensity 'm ³ /s/m'		
		Velocity in 'm/s'			Water level in 'm'								
		25 Yr	50 Yr	100 Yr	25 Yr	50 Yr	100 Yr	25 Yr	50 Yr	100 Yr	25 Yr	50 Yr	100 Yr
0	501	1.66	1.84	1.99	503.83	504	504.12	2.83	3.00	3.12	4.70	5.52	6.21
100	502	2.11	2.31	2.47	503.41	503.52	503.61	1.41	1.52	1.61	2.98	3.51	3.98
200	500	2.81	2.96	3.04	502.19	502.3	502.4	2.19	2.3	2.4	6.15	6.81	7.30
300	499.17	1.3	1.45	1.56	501.42	501.56	501.66	2.25	2.39	2.49	2.93	3.47	3.88
400	499.17	1.98	1.97	1.96	500.98	501.13	501.25	1.81	1.96	2.08	3.58	3.86	4.08
500	498.17	1.8	1.94	2.05	500.43	500.58	500.7	2.26	2.41	2.53	4.07	4.68	5.19
800	496.62	2.9	3.03	3.13	497.91	498.04	498.14	1.29	1.42	1.52	3.74	4.30	4.76
900	495.12	1.56	1.69	1.79	496.55	496.69	496.8	1.43	1.57	1.68	2.23	2.65	3.01
1000	494.49	2.67	2.83	2.94	495.7	495.8	495.88	1.21	1.31	1.39	3.23	3.71	4.09
1100	493.29	1.71	1.81	1.9	494.68	494.82	494.93	1.39	1.53	1.64	2.38	2.77	3.12
1200	492.41	2.71	2.87	2.96	493.68	493.79	493.89	1.27	1.38	1.48	3.44	3.96	4.38
1300	491.3	2.18	2.31	2.41	492.68	492.81	492.92	1.38	1.51	1.62	3.01	3.49	3.90
1400	490.52	2.14	2.33	2.47	491.86	491.96	492.03	1.34	1.44	1.51	2.87	3.36	3.73
1500	489.69	2.47	2.62	2.72	490.54	490.63	490.7	0.85	0.94	1.01	2.10	2.46	2.75
1600	488.23	1.48	1.56	1.62	489.6	489.77	489.89	1.37	1.54	1.66	2.03	2.40	2.69
1800	486.51	2.17	2.29	2.38	488.64	488.82	488.96	2.13	2.31	2.45	4.62	5.29	5.83
1900	486	1.66	1.81	1.92	488.34	488.52	488.65	2.34	2.52	2.65	3.88	4.56	5.09
2000	486.1	3.04	3.21	3.33	487.45	487.59	487.7	1.35	1.49	1.60	4.10	4.78	5.33
2100	484.1	2.31	2.47	2.58	485.75	485.89	486	1.65	1.79	1.90	3.81	4.42	4.90





2200	483.1	2.89	3.05	3.17	484.44	484.56	484.66	1.34	1.46	1.56	3.87	4.45	4.95
2300	482.1	1.89	2.01	2.07	483.42	483.55	483.65	1.32	1.45	1.55	2.49	2.91	3.21
2400	481.34	1.97	2.14	2.25	482.7	482.8	482.88	1.36	1.46	1.54	2.68	3.12	3.47
2500	480.21	1.69	1.72	1.75	482.09	482.26	482.38	1.88	2.05	2.17	3.18	3.53	3.80
2700	478.75	2.28	2.5	2.69	480.88	481.03	481.13	2.13	2.28	2.38	4.86	5.70	6.40
2800	478.6	2.8	2.94	3.05	479.86	479.98	480.07	1.26	1.38	1.47	3.53	4.06	4.48
2900	477.29	2.5	2.65	2.76	478.07	478.16	478.23	0.78	0.87	0.94	1.95	2.31	2.59
3000	475.9	0.98	1.06	1.12	477.51	477.65	477.75	1.61	1.75	1.85	1.58	1.86	2.07
3200	475.07	2.68	2.78	2.86	476.5	476.61	476.7	1.43	1.54	1.63	3.83	4.28	4.66
3300	473.7	1.9	2.02	2.1	475.56	475.71	475.82	1.86	2.01	2.12	3.53	4.06	4.45
3400	473.2	2.49	2.67	2.81	474.58	474.68	474.75	1.38	1.48	1.55	3.44	3.95	4.36
3500	471.96	2.43	2.57	2.69	472.95	473.03	473.1	0.99	1.07	1.14	2.41	2.75	3.07
4000	468.85	0.8	0.88	0.93	472.12	472.4	472.62	3.27	3.55	3.77	2.62	3.12	3.51
4500	468.45	3.6	3.8	3.96	470.76	470.96	471.11	2.31	2.51	2.66	8.32	9.54	10.53
5000	459	2.88	3.03	3.07	461.48	461.74	461.99	2.48	2.74	2.99	7.14	8.30	9.18
5300	457.15	3.04	3.4	3.81	459.02	459.13	459.17	1.87	1.98	2.02	5.68	6.73	7.70
5400	456	2.83	2.92	2.86	457.72	457.85	458	1.72	1.85	2.00	4.87	5.40	5.72
5500	455	1.9	1.82	1.78	457.1	457.44	457.72	2.1	2.44	2.72	3.99	4.44	4.84
5600	453.54	1.56	1.68	1.77	456.95	457.3	457.58	3.41	3.76	4.04	5.32	6.32	7.15
5700	452	3.77	4.14	4.44	456.03	456.22	456.37	4.03	4.22	4.37	15.19	17.47	19.40
5800	453	3.76	4.02	4.22	454.83	455.03	455.19	1.83	2.03	2.19	6.88	8.16	9.24
6000	448.7	2.49	2.78	3.01	453.48	453.78	454.01	4.78	5.08	5.31	11.90	14.12	15.98
6150	448.7	4.22	4.38	4.55	452.25	452.56	452.78	3.55	3.86	4.08	14.98	16.91	18.56
6300	444	2.58	2.87	3.14	451.11	451.52	451.78	7.11	7.52	7.78	18.34	21.58	24.43
6500	444	4.64	4.89	4.89	449.61	449.94	450.29	5.61	5.94	6.29	26.03	29.05	30.76
7000	432.48	3.37	3.6	3.75	434.33	434.49	434.63	1.85	2.01	2.15	6.23	7.24	8.06
7150	429	2.85	3.15	3.3	432.72	433.02	433.25	3.72	4.02	4.25	10.97	12.66	14.03
7250	429	2.97	3.26	3.48	432.23	432.48	432.68	3.23	3.48	3.68	9.59	11.34	12.81

Revised mathematical model studies for flood protection measures of River Markanda in Tehsil Nahau, district. Simour, Himachal Pradesh.

Revised mathematical model studies for flood protection measures of River Markanda in tehsil Nahan, district. Sirmour, Himachal Pradesh.

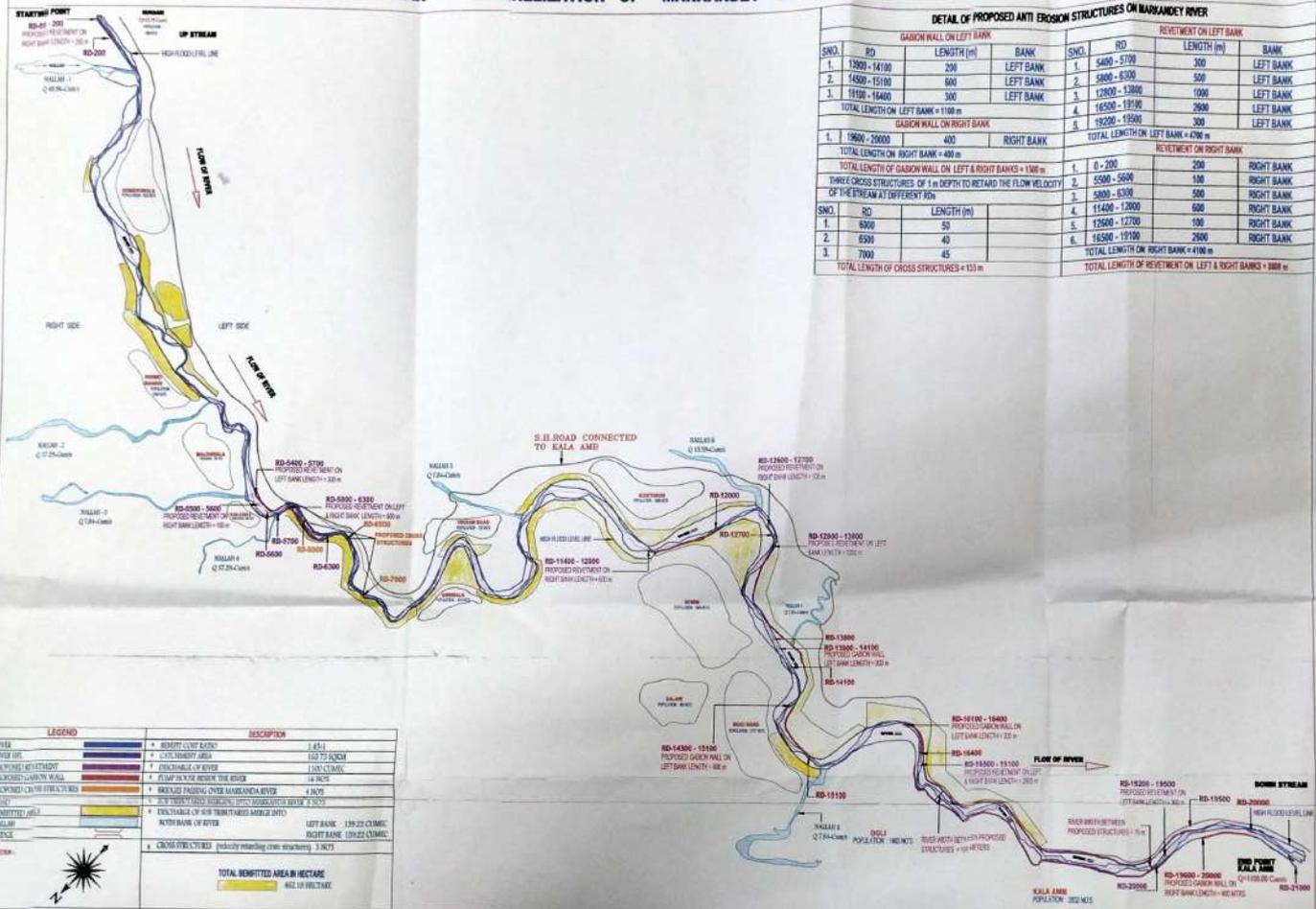
7350	429	3.94	4.19	4.4	431.09	431.31	431.48	2.09	2.31	2.48	8.23	9.68	10.91
7500	425.5	2.53	2.54	2.6	428.78	429.03	429.2	3.28	3.53	3.7	8.30	8.97	9.62
8000	421	3.91	4.26	4.54	424.31	424.58	424.78	3.31	3.58	3.78	12.94	15.25	17.16
8500	417.2	3.6	3.86	4.06	419.88	420.12	420.31	2.68	2.92	3.11	9.65	11.27	12.63
9000	412.05	3.79	4.06	4.29	414.54	414.76	414.92	2.49	2.71	2.87	9.44	11.00	12.31
9400	408	3.38	3.56	3.68	410.68	410.95	411.16	2.68	2.95	3.16	9.06	10.50	11.63
9500	407	2.63	2.82	2.95	410.26	410.54	410.76	3.26	3.54	3.76	8.57	9.98	11.09
9650	406.77	2.9	3.12	3.28	409.47	409.73	409.95	2.70	2.96	3.18	7.83	9.24	10.43
9900	405	2.82	2.97	3.07	408.24	408.58	408.86	3.24	3.58	3.86	9.14	10.63	11.85
10000	404	3.99	4.3	4.59	407.12	407.39	407.56	3.12	3.39	3.56	12.45	14.58	16.34
10100	403.5	4	4.36	4.55	406.04	406.24	406.43	2.54	2.74	2.93	10.16	11.95	13.33
10300	402.5	2.94	3.18	3.37	404.24	404.41	404.55	1.74	1.91	2.05	5.12	6.07	6.91
10500	400.6	3.15	3.4	3.59	401.97	402.11	402.22	1.37	1.51	1.62	4.32	5.13	5.82
11000	396	2.43	2.56	2.67	398.42	398.68	398.88	2.42	2.68	2.88	5.88	6.86	7.69
11200	395	3.09	3.44	3.71	396.98	397.12	397.22	1.98	2.12	2.22	6.12	7.29	8.24
11300	394	3.37	3.4	3.44	395.78	396.02	396.21	1.78	2.02	2.21	6.00	6.87	7.60
11400	392.35	2.82	3	3.13	395.07	395.34	395.57	2.72	2.99	3.22	7.67	8.97	10.08
11500	391.5	4.13	4.34	4.54	393.74	394.01	394.2	2.24	2.51	2.7	9.25	10.89	12.26
12000	387.28	1.76	1.91	2.03	391.22	391.49	391.71	3.94	4.21	4.43	6.93	8.04	8.99
12200	387.28	3.69	3.88	4.03	389.89	390.1	390.27	2.61	2.82	2.99	9.63	10.94	12.05
12400	385	1.45	1.56	1.64	388.82	389.17	389.43	3.82	4.17	4.43	5.54	6.51	7.27
12500	384.67	4.13	4.3	4.47	387.73	388.01	388.21	3.06	3.34	3.54	12.64	14.36	15.82
12600	383.4	2.59	2.79	2.94	386.74	387.06	387.3	3.34	3.66	3.90	8.65	10.21	11.47
12700	382.77	2.21	2.35	2.46	386.51	386.85	387.11	3.74	4.08	4.34	8.27	9.59	10.68
12800	382.34	2.53	2.74	2.9	386.15	386.46	386.7	3.81	4.12	4.36	9.64	11.29	12.64
13000	381.4	4.2	4.46	4.66	384.38	384.64	384.84	2.98	3.24	3.44	12.52	14.45	16.03
13160	379	2.17	2.38	2.54	382.78	383.1	383.36	3.78	4.10	4.36	8.20	9.76	11.07
13500	378.5	3.99	4.21	4.42	380.79	381.03	381.21	2.29	2.53	2.71	9.14	10.65	11.98



Revised mathematical model studies for flood protection measures of River Markanda in tehsil Nahan, district. Sirmour, Himachal Pradesh.

13800	376	1.79	2	2.15	380.16	380.43	380.65	4.16	4.43	4.65	7.45	8.86	10.00
13900	376.8	3.77	3.94	4.13	379.24	379.47	379.62	2.44	2.67	2.82	9.20	10.52	11.65
14000	375.29	1.85	1.96	2.05	378.15	378.47	378.73	2.86	3.18	3.44	5.29	6.23	7.05
14100	374.61	4.1	4.35	4.53	377	377.25	377.45	2.39	2.64	2.84	9.80	11.48	12.87
14500	372.25	2.23	2.41	2.54	375.19	375.49	375.73	2.94	3.24	3.48	6.56	7.81	8.84
15000	368.76	4.26	4.49	4.69	371.92	372.2	372.41	3.16	3.44	3.65	13.46	15.45	17.12
15500	365	2.84	3.11	3.32	369.55	369.91	370.2	4.55	4.91	5.20	12.92	15.27	17.26
15800	363.63	4.49	4.67	4.85	367.32	367.65	367.89	3.69	4.02	4.26	16.57	18.77	20.66
15900	362.65	4.31	4.46	4.68	366.06	366.38	366.58	3.41	3.73	3.93	14.70	16.64	18.39
16000	362.05	2.89	2.97	3.03	365.28	365.65	365.95	3.23	3.60	3.90	9.33	10.69	11.82
16100	361	2.51	2.66	2.77	364.99	365.38	365.69	3.99	4.38	4.69	10.01	11.65	12.99
16200	360.12	3.39	3.67	3.88	364.33	364.66	364.93	4.21	4.54	4.81	14.27	16.66	18.66
16500	358.5	3.94	4.15	4.32	362.27	362.65	362.94	3.77	4.15	4.44	14.85	17.22	19.18
17000	355.2	3.6	3.94	4.2	359.37	359.71	359.98	4.17	4.51	4.78	15.01	17.77	20.08
17500	351.94	4.38	4.66	4.9	355.33	355.61	355.82	3.39	3.67	3.88	14.85	17.10	19.01
18000	349.54	1.74	1.91	2.03	353.84	354.25	354.59	4.30	4.71	5.05	7.48	9.00	10.25
18500	349.54	4.38	4.64	4.9	351.85	352.14	352.34	2.31	2.6	2.8	10.12	12.06	13.72
19000	344	3.24	3.52	3.75	348.34	348.73	349.04	4.34	4.73	5.04	14.06	16.65	18.90
19100	341.5	2.25	2.52	2.74	348.36	348.75	349.06	6.86	7.25	7.56	15.44	18.27	20.71
19200	342.81	4.06	4.42	4.71	347.53	347.81	348.02	4.72	5.00	5.21	19.16	22.10	24.54
19300	343.14	4.4	4.67	4.87	346.45	346.74	346.96	3.31	3.60	3.82	14.56	16.81	18.60
19400	340.18	3.36	3.52	3.65	344.38	344.83	345.19	4.20	4.65	5.01	14.11	16.37	18.29
19500	339.37	3.39	3.7	3.93	343.95	344.34	344.65	4.58	4.97	5.28	15.53	18.39	20.75
19600	338	2.97	3.26	3.49	343.73	344.12	344.42	5.73	6.12	6.42	17.02	19.95	22.41
19800	338.64	4.7	4.99	5.19	342.06	342.38	342.64	3.42	3.74	4.00	16.07	18.66	20.76
20000	335.5	3.63	4.04	4.37	340.16	340.52	340.79	4.66	5.02	5.29	16.92	20.28	23.12
20250	334	4.58	4.84	5.04	338.24	338.56	338.81	4.24	4.56	4.81	19.42	22.07	24.24
20500	332.5	3.94	4.2	4.41	335.57	335.88	336.12	3.07	3.38	3.62	12.10	14.20	15.96

MASTER PLAN OF CHANNELIZATION OF MARKANDEY RIVER DISTT. SIRMOUR



DETAIL OF PROPOSED ANTI EROSION STRUCTURES ON MARKANDEY RIVER

GABION WALL ON LEFT BANK				REVEINMENT ON LEFT BANK			
SNO.	RD	LENGTH (m)	BANK	SNO.	RD	LENGTH (m)	BANK
1.	1200 - 14100	290	LEFT BANK	1.	5400 - 5700	300	LEFT BANK
2.	14500 - 15100	600	LEFT BANK	2.	5800 - 6300	500	LEFT BANK
3.	15100 - 16400	300	LEFT BANK	3.	12800 - 13800	1000	LEFT BANK
TOTAL LENGTH ON LEFT BANK = 1190 m				4.	16500 - 18100	2600	LEFT BANK
GABION WALL ON RIGHT BANK				5.	19200 - 19500	300	LEFT BANK
1.	19600 - 20000	400	RIGHT BANK	TOTAL LENGTH ON LEFT BANK = 470 m			
TOTAL LENGTH ON RIGHT BANK = 400 m				REVEINMENT ON RIGHT BANK			
TOTAL LENGTH OF GABION WALL ON LEFT & RIGHT BANKS = 1590 m				1.	0 - 200	200	RIGHT BANK
THREE CROSS STRUCTURES OF 4 m DEPTH TO RETAIN THE FLOW VELOCITY OF THE STREAM AT DIFFERENT R/S				2.	5200 - 5600	400	RIGHT BANK
SNO.	RD	LENGTH (m)		3.	5800 - 6300	500	RIGHT BANK
1.	6300	50		4.	11400 - 12000	600	RIGHT BANK
2.	6500	40		5.	12600 - 12700	100	RIGHT BANK
3.	7000	45		6.	16500 - 19100	2600	RIGHT BANK
TOTAL LENGTH OF CROSS STRUCTURES = 135 m				TOTAL LENGTH OF REVEINMENT ON LEFT & RIGHT BANKS = 3800 m			

No. SIR-SK(1-B)/MM/Ener/2022- 1585
OFFICE OF DEPUTY COMMISSIONER,
DISTRICT SIRMAUR AT NAHAN (H.P.).

To

Regional Officer,
Pollution Control Board Paonta Sahib,
District Sirmaur (H.P.).

Dated: Nahan, the 10th October, 2023.

Subject: - Regarding removal of encroachment on river Markanda.

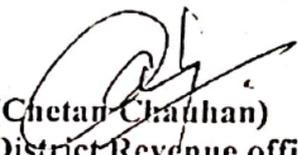
Sir,

Please find enclosed herewith a copy of letter No. Reader/Tehsil/Nahan/2021-4952 Dated 10.10.2023 received from the office of Tehsildar Nahan, on the subject cited above.

In this regard, it has been informed by the Tehsildar Nahan that no encroachment was found around Markanda River. Hence, report is submitted for information and further necessary action at your end please.

Encls. - As above (01 Page)

Yours faithfully,


(Chetan Chauhan)
District Revenue officer,
District Sirmaur at Nahan (H.P.)

क्रमांक सं०: रीडर/तहसील/नाहन/2021- ५१५१
कार्यालय तहसीलदार, तहसील नाहन, जिला सिरमौर, हि०प्र०।
दिनांक:- 10-10-2023

सेवा में,

जिला राजस्व अधिकारी,
जिला सिरमौर स्थित नाहन।

विषय-

Regarding removal of encroachment on river
Markanda.

महोदय,

उपरोक्त विषय के सन्दर्भ में आपके कार्यालय पत्र क्रमांक SMR-
SK(1-B)/MM/Encr/2022-1525 दिनांक 1525 की अनुपालना में क्षेत्रीय कर्मचारियों से
छानबीन करवाई गई, जिसमें पाया गया है कि मारकण्डा नदी के आसपास किसी भी
तरह का कोई अवैध कब्जा नहीं पाया गया है।

अतः मारकण्डा नदी के आसपास अवैध कब्जा बारे सूचना शून्य

समझी जावें।

भवदीय,


तहसीलदार नाहन,
जिला सिरमौर, हि० प्र०।

❖ Status of discharge of untreated domestic sewage or industrial effluent in to River Markanda or its tributaries in Districts Panchkula, Ambala, Kurukshetra and Kaithal of Haryana

Sr. no.	Name of drain/ Nallah carrying untreated effluent	Location of drain/ Nallah With GPS coordinates		Starting point of drain/Nallah / Rivulets	Discharge and Final merging into River/Drain	Source of generation of untreated effluent
		Latitude	Longitude			
A.	State of Himachal Pradesh (Total 03 Nos of discharge points & 01 of Rivulet)					
1	Jattanwala Nallah	30.505702	77.204946	Kala Amb area	River Markanda	Treated industrial effluent + domestic effluent
2	Drain near M/s Vashisht Chemicals	30.50324	77.21904	Kala Amb area	River Markanda	Domestic effluent
3	Rampur Jattan drain near Radha Swami Satsang Bhawan	30.506531	77.221177	Kala Amb area	River Markanda	Domestic effluent
4	Salani Khadd (Rivulet)	30.516833	77.246323	Kaula wala bhoad	River Markanda	Domestic effluent
B.	State of Haryana (Total 38 Nos of discharge points)					
a.	District Ambala (Total 23 Nos of discharge points)					
1	Shiv Colony	30.5027	77.2059	Kala Amb	Jattan Wala Nallah which is finally merging into River Markanda	Domestic effluent
2	Durga Colony	30.5002	77.2036	Dera	Jattan Wala Nallah which is finally merging into River Markanda	Domestic effluent
3	Officer Colony	30.4966	77.2073	Kala Amb	Markanda River	Domestic effluent
4	Shivalik Colony	30.4938	77.2048	Kala Amb	Markanda River	Domestic effluent
5	Navjot Colony	30.4958	77.2028	Kala Amb	Markanda River	Domestic effluent
6	Jattan Wala Nallah	30.4923	77.1977	Kala Amb	Markanda River	Domestic and Industrial effluent
7	Gadhauli Village Drain	30.3798	77.166	Gadhauli Village	Markanda River	Domestic effluent

8	Nagla Rajputan Village Drain	30.3693	77.1506	Nagla Rajputan Village	Markanda River	Domestic effluent
9	Zaffarpur Nallah	30.3237	77.1348	Zaffarpur Village	Markanda River	Domestic effluent
10	Mullana Nallah	30.2783	77.0299	Mullana Village	Markanda River	Domestic effluent
11	Gokulgarh Drain	30.3833	77.0473	Village Gokulgarh	Begna River which is finally merging into River Markanda	Rainy water with domestic effluent
12	Panjeton Drain	30.3869	77.0461	Village Panjeton	Begna River which is finally merging into River Markanda	Rainy water with domestic effluent
13	Ghallery Link Drain	30.248	76.9854	Ghallery Village	Markanda River	Rainy water with domestic effluent
14	Harda Hardi Drain	30.2499	76.9694	Hardi Village	Markanda River	Rainy water with domestic effluent
15	Mahesh Nagar Link Drain	30.3625	76.885	Village Babyal	Tangri River which is finally merging into River Markanda	Domestic effluent
16	Cunnette Drain Outfall in River Tangri	30.3178	76.8508	Village Shahpur	Tangri River which is finally merging into River Markanda	Domestic effluent
17	Shahpur Drain	30°18'0.51"N	76°50'34.69"E	Shahpur Pond	Tangri River which is finally merging into River Markanda	Domestic effluent
18	Machhonda Drain	30°18'45.55"N	76°50'18.57"E	Machhonda Fatak	Tangri River which is finally merging into River Markanda	Domestic effluent
19	Panchayat Nallah	30°16'44.43"N	76°49'10.44"E	Kot Kachhwa	Tangri River which is finally merging into River Markanda	Domestic effluent
20	Panchayat Nallah	30°15'10.00"N	76°48'32.27"E	Dhanoura	Tangri River which is finally merging into River Markanda	Domestic effluent
21	Jodha Nallah	30°12' 08" N	76°44'49"E	Jalalpur village	Tangri River which is finally merging into River Markanda	Domestic effluent
22	Outfall Link Drain	30°18' 59" N	76°51' 10" E	Segti	Tangri River which is finally merging into River Markanda	Rainy water with domestic effluent
23	Panchayat Nallah	30°11'14.61"N	76°37'38.54"E	Bhunni	Tangri River which is finally merging into River Markanda	Domestic effluent
b.	District Kurukshetra (Total 11 Nos of discharge points)					
1	Nallah of Abadi Vllage Kalsana	30.155898	76.820605	Village Kalsana	Markanda River	Domestic effluent

2	Nallah of abadi Vllage Malikpur	30.161045	76.837963	Village Malikpur	Markanda River	Domestic effluent
3	Nallah of abadi Vllage Katwa	30.131357	76.797501	Village katwa	Markanda River	Domestic effluent
4	Nallah of abadi Vllage Tangor	30.128017	76.755516	Village Tangor	Markanda River	Domestic effluent
5	Nallah of abadi Vllage Jhansa	30.118145	76.740341	Village Jhansa	Markanda River	Domestic effluent
6	Nallah of abadi Vllage Mohmadshah	30.100257	76.708195	Village Mohmadshah	Markanda River	Domestic effluent
7	Pipeline from Jalbera Village RD 0 to 2000 in length 2000	30.075226	76.669785	Village Jalbera	Markanda River	Domestic effluent
8	Ismailabad Drain in a length of 41830ft	30.066823	76.629982	Ismailabad	Markanda River	Domestic effluent
9	Jakhwala Drain from RD 0 to 14000 in length 14000	30.075184	76.545588	Village Jakhwala	Markanda River	Domestic effluent
10	Pump House at RD 62500	30.065137	76.497222	Village Karah Sahib	Markanda River	Rainy water with domestic effluent
11	Karah Drain RD 0 to 5800 in length 5800	30.05665	76.481208	Village Karah Sahib	Markanda River	Domestic effluent
c. District Panchkula (Total 04 Nos of discharge points)						
1	Nallah of abadi Vllage Khangshera	--	--	Vllage Khangshera	Tangri River which is finally merging into River Markanda	Domestic effluent
2	Dangri Nallah	--	--	Vllage Bhoj Ponta	Tangri River which is finally merging into River Markanda	Domestic effluent
3	Barwala Drain	--	--	Vllage Barwala	Tangri River which is finally merging into River Markanda	Domestic effluent
4	Nallah of abadi Vllage Mouli	--	--	Vllage Mouli	Tangri River which is finally merging into River Markanda	Domestic effluent
d. District Kaithal						
Nil, as having no such discharge point available from district kaithal into River Markanda or its tributaries.						

Management of sewage generated from 12 towns in Districts of Panchkula, Ambala, Kurukshetra and Kaithal in Haryana

Sr.No	District	Name of Town	Name of Deptt.	Present population as in 2021	Water Consumption in 2021 (in MLD)	Sewage Generated (in MLD) 2021	Actual discharge reaching to STPs in MLD	No. & Treatment Capacity (in MLD)					
								Existing		Under construction		Proposed	
								No.	Cap.	No.	Cap.	No.	Cap.
1	Ambala	Naraingarh	PHED /HSVP	28049	3.79	3.00	1.70	1	3	0	0	1	1
2		Ambala	PHED /HSVP/ ULBD	375009	50.63	40.50	22.10	13	48	4	44	1	5
3	Kaithal	Cheeka	PHED	47851	6.46	5.17	5.50	1	10	0	0	0	0
4		Kaithal	PHED /HSVP	178023	24.03	19.23	21.50	4	37.5	0	0	0	0
5		Kalayath	PHED	21317	2.88	2.30	3.50	1	5	0	0	0	0
6		Pundri	PHED	23184	3.13	2.50	3.25	1	3.5	0	0	0	0
7	Kurukshetra	Shahbad	PHED	52341	7.07	5.65	6.50	1	11.5	0	0	0	0
8		Pehowa	PHED	47729	6.44	5.15	5.50	1	8	0	0	0	0
9		Thanesar	PHED/ HSVP	177245	23.93	19.14	18.00	2	40	0	0	0	0
10	Panchkula	Kalka	PHED	37136	5.01	4.01	2.55	2	4.75	0	0	0	0
11		Pinjore	PHED	32747	4.42	3.54	3.50	1	5	0	0	0	0
12		Panchkula	PHED /HSVP /ULBD /Garrison	317476		34.74	34.74	12	87.5	0	0	1	8
Total				1338107	137.79	144.93	128.34	40	264	4	44	3	14

NO.-JSDN-DB-(RTWQMS)-2023-
To

10684-85

Dated:

13/10/23

The Regional Officer,
Himachal Pradesh State Pollution Control Board,
Paonta Sahib (HP).

Subject: Status report in OA No. 515 of 2022 titled as Dharmvir V/s State of Haryana & Ors. pending before Hon'ble National Green Tribunal.

Reference:- your office letter No. PCB/RO Paonta Sahib/OA No. 515/23-2010-11 dated 12.10.2023.

Sir,

With reference to your office letter under reference desired status report is as under:-

Providing Sewerage system for Kala Amb and Moginand area: Laying of sewerage network and primary treatment plant (1.7 MLD)

Sewer Network : The total sewer network proposed is 21645 mtr. against which 20500 mtr sewer network was laid. Hence, Sewer network of this scheme was going on war footing level & was nearing completion until advent of monsoon season when intense rainfall in the month of June-July,2023 causes substantial rain damages and pushed the progress of scheme backward. The main sewer trunk line along Markanda(from Moginand Side) and that from Dhakanwala has suffered major damages. The sewer lines along supporting pillars of trunk sewer line along Markanda have been damaged at several points. The trunk sewer line from Dhakanwala of 1642 mtr length is completely damaged. These damages need time to restore which will be completed by March,24 subject to availability of funds.

Primary Treatment Unit : This is part of CETP (constructed by Department of Industries) is completed in all respect.

CETP can be made functional through trunk sewer line from Kala Amb side, if people of adjacent area take connections.

House Sewer Connection: People have been requested to take sewer connection through wide publication. But no application has been received till date. Awareness camp in this regard is being organized by BDO, Nahan

Proposed time line to function the Scheme: March, 2024.

Budget Required to complete balance work: Rs. 8.50 Crores (including budget required for restoration of rain damages)

Providing sewerage system for Trilokpur, Kheri and Johron area: Laying of sewerage network and Setting up of sewerage treatment plant (1.5 MLD)

Sewer Network: The total sewer network proposed is 8500mtr. against which 7900mtr sewer network was laid.

Sewage Treatment Plant (STP): This work is complete in all respect.

STP can be made functional by taking sewage from Trilokpur Temple Complex. But main trunk sewer line laid at Bridge near STP got damaged during flood in nallah caused by intense rainfall in the month of June-July,2023 which is being restored. The damages due to intense rainfall also occurred at various points of sewer network. These damages need time to restore which will be completed by March,24 subject to the availability of funds.

House Sewer Connection: People have been requested to take sewer connection through wide publication. But no application has been received till date. Awareness camp in this regard is being organized by BDO, Nahan .

Proposed time line to function the Scheme: March, 2024.

Budget Required to complete the balance work: Rs. 3.25 Crores (including budget required for restoration of rain damages)

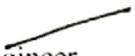
Installation of Continuous Real Time Water Quality Monitoring Station at Markanda River

This Real Time Water Quality Monitoring Station (RTWQMS) was successfully installed at Markanda River. But, during heavy rainfall in August 2022, the same got completely damaged. The sensors were washed away making it completely defunct. Now to resume its functioning a fund of Rs. 31.00 Lakh is required. It is also required to shift the current site of RTWQMS to a secured site where continuous uninterrupted flow is available so that it may not get affected by adverse effect of heavy rainfall as well as by meandering nature of river as wells.

Budget Required for re-installation of RTWQMS – Rs. 31.00 Lakh.


Executive Engineer,
Jal Shakti Division Nahan

Copy to the Superintending Engineer Jal Shakti Circle Nahan w.r.t his endorsement No. 6610 dated 13.10.2023 for information please.


Executive Engineer,
Jal Shakti Division Nahan

0410

KALA AMB INFRASTRUCTURE DEVELOPMENT COMPANY (KIDC)**C/o Common Facility Centre, Kala Amb, Distt. Sirmour, H.P.****Email : kidc.cetp@gmail.com**

Ref. No. :- KIDC/- JSV-03

To

Dated: 25-09-2023

The Executive Engineer,
Jal Shakti Vibhag, Nahan, Distt Sirmaur H.P.

Sub: Repair & Maintenance of sewage pipeline of JSV for smooth functioning of CETP Kala Amb.

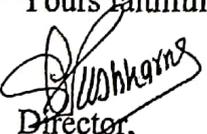
Sir,

As you are aware that as per Hon'ble NGT orders, a combined CETP of 2.50 MLD capacity for the purpose of treatment of Industrial effluent and Domestic sewage has been set up at KalaAmb. You are informed that CTO (Consent to Operate) has been received from HPSPCB dated on 21.09.2023 for smooth operation of CETP. In this regard, we want to kind your attention towards damaged Domestic sewage pipeline of Jal Shakti Vibhag (JSV). Along with Industrial Effluent, Domestic sewage is also a Primary/Essential row material for the smooth functioning of CETP and without Domestic sewage we are not able to treat or functioning of CETP. So please resolve the issue as soon as earliest, so that the functioning can be operated in good manner.

The matter was discussed already during the site visit of worthy MS, HPPCB Shimla on 27-5-2023 who advised SDO IPH Kala Amb to get this issue resolved and in case funds is any issue then same should be taken up with the Govt. Please expedite being Hon'ble NGT matter.

Thanking you.

Yours faithfully,


Director,
KIDC Kala Amb

C.C. to

1. The General Manager of Industries, H.P. Nahan-cum- Nodal Officer, CETP Kala Amb with the request to please take up the matter with JSV Deptt. and other authorities.

2. The Regional Officer (RO) HPSPCB, Paonta sahib, Sirmour HP.

List of water polluting industries along with their final disposal and their compliance status of Himachal Pradesh										Annexure-H
Sr. No.	Name of the unit	Address	Category	Industry Type	Catchment Area	Daily Waste Water Generation (KL)	Mode of Treatment	Effluent Treatment System Details	Final Mode of Disposal	Compliance Status
1	Adwin Pharma.	Vill. Rampur Jattan, Kala Amb.	Orange	Pharmaceutical formulation	Jattan Wala	3	ETP of Capacity 4 KLD	ETP followed by Evaporator of capacity 150 liters/hr	ZLD	Complying
2	AGV Fenestration (P) Ltd.	Vill. Johron, Kala Amb.	Red	Aluminium door window	Jattan Wala	0.5	ETP of Capacity 3 KLD	ETP	Gardening within plant premises	Complying
3	Alps Communications	Village Jattan Wala, Trilokpur Road, Kala Amb	Orange	Pharmaceutical formulation	Jattan Wala	2	ETP of Capacity 3 KLD	ETP followed by Evaporator of capacity 400 liters/hr	ZLD	Complying
4	Art N Glass, Unit-I	Village Johron, Kala Amb	Orange	Laminated and Toughened glass	Jattan Wala	1.5	ETP of Capacity 5 KLD, STP of capacity 15 KLD	ETP	Gardening within plant premises	Complying
5	Art-N-Glass unit II	Vill Johron, kala Amb	Orange	Laminated and Toughened glass	Jattan Wala	1.5	ETP of Capacity 5 KLD	ETP	Gardening within plant premises	Complying
6	Axsys Solutions	Village Johron, Kala Amb	Red	Surface Metal Treatment	Jattan Wala	1.5	ETP of Capacity 4 KLD	ETP	Gardening within plant premises	Complying
7	Blue star Ltd, Unit-II	Village Manthapal, Kala Amb	Green	AC Assembly only	Jattan Wala	8	2 Nos of STPs of Capacity 15 KLD each	STP	Gardening within plant premises	Complying
8	BROP	Village Ogli, Trilokpur Road, Kala Amb	Orange	Disinfectants & Ointments	Jattan Wala	0.8	ETP of capacity 1.5 KLD	ETP followed by Evaporator of capacity 500 liters/hr	ZLD	Complying
9	C S Zircon Product.	Village Rampur Jattan, Trilokpur Road, Kala Amb.	Red	Zircon Products	Jattan Wala	20	ETP of Capacity 30 KLD	ETP	Reused in Process	Complying
10	Geeta Industries	Vill. Ogli, Trilokpur Road, Kala Amb.	Red	Industry involving metal treatment or process	Jattan Wala	3	ETP of Capacity 4 KLD	ETP followed by RO of capacity 500 liters/hr	Reused in Process	Complying
11	Gold Plus Himachal Safety Glass.	Village Johron, Kala Amb	Orange	Laminated/Toughened Glass (Cutting and Heat Treatment only)	Jattan Wala	1	ETP of Capacity 2 KLD	ETP	Gardening within plant premises	Complying
12	MMG Healthcare.	Vill. Johron Kala Amb.	Orange	Pharmaceutical formulation	Jattan Wala	2	ETP of Capacity 12 KLD	ETP	Reused in Process	Complying
13	Oscar Remedies	Vill. Johron Kala Amb.	Orange	Pharmaceutical formulation	Jattan Wala	1.5	ETP of Capacity 4.5 KLD	ETP	Reused in Process	1st Show Cause notice Issued
14	Ovation Remides.	Village Johron, Kala Amb.	Orange	Pharmaceutical formulation	Jattan Wala	1	ETP of Capacity 5 KLD	ETP	Reused in Process	1st Show Cause notice Issued
15	Pidilite Industries (Unit-III)	Rampur Jattan, Kala Amb	Orange	Adhesive Monomer Based products	Jattan Wala	35	ETP cum STP of Capacity 50 KLD	RO System, MBR of capacity 24 KLD, ATFD of capacity 100 kg per hour	ZLD	Complying
16	Pidilite Industry Ltd., (Unit-II)	Johoron, Kala Amb, Distt. Sirmour.	Orange	Synthetic resins	Jattan Wala	44	ETP cum STP of Capacity 75 KLD	ETP cum STP	Gardening within plant premises	Complying
17	Rich Gravsis Pvt. Ltd	Village Manthapal, Kala Amb	Orange	Non - Dairy Whip Cream	Jattan Wala	80	ETP cum STP of Capacity 150 KLD	ETP cum STP	Gardening/irrigation on nearby land acquired by unit	Complying
18	Ruchira Paper Mills Ltd. (Writing Ppaer Unit)	Trilokpur Road Kala Amb.	Red	Pulp and Paper	Jattan Wala	4000	ETP cum STP of Capacity 11000 KLD			Complying
19	Ruchira Paper Mills Ltd. (Kraft Paper Unit)	Kala Amb, Distt. Sirmour HP.	Red	Pulp and Paper	Jattan Wala		ETP cum STP	Discharge in drain	Complying	
20	Saboo Cylinder.	Ind Area Kala Amb.	Orange	LPG Cylinders	Jattan Wala	7	ETP of Capacity 10 KLD, STP of capacity 35 KLD	ETP, STP	Reused in Process and gardening	Complying
21	Sagar Katha Factory	Trilokpur Road Kala Amb.	Orange	Kath Manufacturing	Jattan Wala	10	ETP of Capacity 12 KLD	ETP	Reused in Process	Complying
22	Sarv Biolab (P) ltd.	Village Rampur Jattan, Trilokpur Road, Kala Amb.	Orange	Herbal Extraction	Jattan Wala	37	ETP of Capacity 50 KLD	Dual Stage RO, Evaporator	ZLD	Complying
23	SBS Biotech. Unit -I	Vill. Rampur Jattan, Nahan Road, Kala Amb.	Orange	Pharmaceutical formulation	Moginand	0.5	ETP of Capacity 5 KLD	ETP	Gardening within plant premises	Complying
24	Sheela Foam.	Nahan Road, Kala Amb.	Green	Mattresses	Jattan Wala	13	STP of Capacity 25 KLD	STP	Gardening within plant premises	Complying
25	Shree Krishna Steelage (P) Ltd.	Trilokpur Road Kala Amb.	Red	Surface Metal Treatment	Jattan Wala	3.5	ETP of Capacity 5 KLD	ETP	Reused/Recycle	Complying
26	Siddhi Vinayak Industries	Village Johron, Kala Amb	Orange	Pharmaceutical formulation	Jattan Wala	1	ETP of capacity 5 KLD	Evaporator after ETP		Complying

List of water polluting industries along with their final disposal and their compliance status of Himachal Pradesh										
Annexure-H										
Sr. No.	Name of the unit	Address	Category	Industry Type	Catchment Area	Daily Waste Water Generation (KL)	Mode of Treatment	Effluent Treatment System Details	Final Mode of Disposal	Compliance Status
27	SNS Corporation Unit-II	Village Rampur Jattan, Nahan Road, Kala Amb	Red	Galvanization process	Moginand	2	ETP of Capacity 4 KLD	RO of capacity 100 liters per hour	Reused in Process	Complying
28	Systole Remedies.	Vill. Ogli, Trilokpur Road, Kala Amb.	Orange	Pharmaceutical formulation	Ogli	2	ETP of Capacity 15 KLD	ETP	Gardening within plant premises	1st Show Cause notice Issued
29	Vinay Packaging (Athens Lab)	Vill. Rampurjattan, Nahan Road, Kala Amb.	Orange	Pharmaceutical formulation	Moginand	1.5	ETP of Capacity 10 KLD	ETP	Gardening within plant premises	Complying
30	Virgo Industries	Village Rampurjattan, Kala Amb	Red	Laminated Sheets and Boards	Jattan Wala	21	ETP cum STP of Capacity 60 KLD	ETP	Reused/Recycle	Complying
31	Accura Care Pharmaceuticals (P) Ltd.	Vill. Moginand, Kala Amb.	Orange	Pharmaceutical formulation	Moginand	2	ETP of Capacity 10 KLD	ETP	RO System for Resued/recycle	1st Show Cause notice Issued
32	Blue Star Ltd, Unit-I	Village Moginand, Kala Amb	Green	Air Conditioner Assembly	Moginand	25	STP of Capacity 50 KLD	STP	Irrigation/Gardening within unit premises	Complying
33	Care Cosmetic.	Vill. Moginand Kala Amb	Orange	Cosmetic Products	Moginand	0.2	ETP of Capacity 3 KLD	ETP	Gardening within plant premises	Complying
34	Elnova Pharma.	Village Moginand, Kala Amb.	Orange	Pharmaceutical formulation	Moginand	7	ETP of Capacity 15 KLD	ETP	Reused within unit for gardening and cleaning activities	Complying
35	Gnosis Pharma.	Vill. Moginand Kala Amb.	Orange	Pharmaceutical formulation	Moginand	8	ETP-cum-STP of Capacity 20 KLD	ETP cum STP	Reused within unit for gardening , cooling tower and toilet flushing	1st Show Cause notice Issued
36	Indkus biotech india	Village moginand, Kala Amb	Orange	Pharmaceutical formulation	Moginand	5	ETP of Capacity 10 KLD	2 Nos Evaporator after ETP		Complying
37	Indo Rama Engineers	Village Moginand, Kala Amb	Orange	Pharmaceutical formulation	Moginand	3.5	ETP of Capacity 5 KLD	Evaporator after ETP		Complying
38	Integrated Lab.	Moginand Kala Amb.	Orange	Pharmaceutical formulation	Moginand	2.4	Comman ETP of Capacity 3 KLD	ETP	Gardening within plant premises	Complying
39	Welcure Remedies	Moginand Kala Amb.	Orange	Pharmaceutical formulation						
40	KAG Industries	Village Moginand, Kala Amb	Orange	Food and food processing	Moginand	ETP- 10 KLD STP- 2 KLD	ETP of Capacity 50 KLD STP of capacity 10 KLD	ETP and STP	Reused in Toilet Flushing, Gardening	Complying
41	Konark Enterprises.	Vill. Moginand Kala Amb	Red	Street Light Manufacturing	Moginand	2	ETP of Capacity 5 KLD	ETP	Gardening within plant premises	Complying
42	Konark Fixtures	Village Moginand, Kala Amb	Red	Aluminum Die Casting manufacturing	Moginand	14	ETP cum STP of Capacity 25 KLD	ETP cum STP	Reused in gardening activities and colloing towers	Complying
43	Konark Herbal & Health Care	Village Moginand, Kala Amb	Orange	Herbal Extraction	Moginand	5.5	ETP cum STP of Capacity 30 KLD	ETP cum STP	Gardening within plant premises	Complying
44	Konark Poducts	village Moginand, Kala amb	Red	Street Light Manufacturing	Moginand	4.5	ETP cum STP of Capacity 5 KLD	ETP cum STP	Irrigation /gardeningwithin unit premises	Complying
45	Medisys Biotech Private Limited.	Moginand, Kala Amb.	Orange	Pharmaceutical formulation	Moginand	1	ETP of Capacity 2 KLD	ETP	Gardening activites	Complying
46	Phoenix Udyog.	Kala Amb, Distt. Sirmour HP.	Red	Sheet Metal Fabrication	Moginand	4.5	ETP of Capacity 10 KLD	ETP	Reused within plant in cooling towers	Complying
47	Pidilite Industry Ltd. (Unit -I)	Village Moginand, Kala Amb	Orange	Monomer Based Adhesive manufacturer	Moginand	5	STP of Capacity 15 KLD	STP	Reused within plant in gardening and toilet Flushing.	Complying
48	Sozin Flora Pharma. (AMN Lifescience)	Village Moginand, Kala Amb.	Orange	Pharmaceutical formulation	Moginand	12	ETP cum STP of Capacity 14 KLD	ETP cum STP	Gardening within plant premises	Complying
49	Sunvet Pharma Private Limited.	Village Moginand, Kala Amb.	Orange	Pharmaceutical formulation	Moginand	2	ETP of Capacity 5 KLD	ETP	Used for irrigation /gardening activities within unit premises	Complying
50	Indo Phyto Chem	Mauza Rampur Jattan, Nahan Road, Kala Amb	Orange	Herbal Extraction	Moginand	0.7	ETP of capacity 10 KLD	Evaporator after ETP		Complying
51	Biologic Inc.	Vill. Ogli, Suketi Road, Kala Amb.	Orange	Pharmaceutical formulation	Suketi Road	1	Evaporator	Evaporator		Complying
52	Insight Soft Labz	Suketi Road Kala Amb	Orange	Pharmaceutical formulation	Suketi Road	2	ETP of Capacity 4 KLD	Evaporator after ETP		Complying
53	Protech Telelinks	Suketi Road Kala Amb	Orange	Pharmaceutical formulation	Suketi Road	1	ETP of Capacity 5 KLD	ETP	Used for irrigation activities within unit premises	Complying
54	Shivam Enterprises	Suketi Road Kala Amb	Orange	Pharmaceutical formulation	Suketi Road	2.5	ETP of Capacity 10 KLD	ETP		Complying

List of water polluting industries along with their final disposal and their compliance status of Himachal Pradesh										Annexure-H
Sr. No.	Name of the unit	Address	Category	Industry Type	Catchment Area	Daily Waste Water Generation (KL)	Mode of Treatment	Effluent Treatment System Details	Final Mode of Disposal	Compliance Status
55	Symboisis Pharmaceuticals.	Suketi Road, Kala Amb.	Orange	Pharmaceutical formulation	Suketi Road	9	ETP cum STP of Capacity 20 KLD	ETP cum STP	Used for gardening and disosed through CETP	Complying
56	Candour Pharmaceuticals	Suketi Road, Kala Amb.	Orange	Pharmaceutical formulation	Suketi Road	1	ETP of Capacity 5 KLD	Evaporator after ETP	Reused in gardening activities	Complying
57	Algen Healthcare.	Sadhora Road, Kala Amb (Near SPT Industries)	Orange	Pharmaceutical formulation	Sadhora Road	2	ETP of capacity 12 KLD followed by Evaporator	Evaporator after ETP		Complying
58	Aqua Parental	Village Khari, Sadhora Road, Kala Amb	Orange	Pharmaceutical formulation	Sadhora Road	6	ETP of Capacity 20 KLD	ETP	Irrigation within unit premises	Complying
59	Himachal Polyolefins.	Village Khari, Sadhora Road, Kala Amb.	Orange	Lime manufacturing	Sadhora Road	30	ETP of Capacity 40 KLD	ETP	Reused in slaker, slaking process	Complying
60	Orison Pharma International.	Vill. Ogli, Sadhora Road, Kala Amb	Orange	Pharmaceutical formulation	Sadhora Road	1	ETP of Capacity 5 KLD	ETP	Reused within plant for irrigation activities	Complying
61	Primus Pharmaceutical	Village Kheri, Sadhora Road, Kala Amb	Orange	Pharmaceutical formulation	Sadhora Road	1.5	ETP of Capacity 3 KLD	ETP	Reused in cooling towers and gardening activities	1st Show Cause notice Issued
62	SPT Industries	Village Ogli, Sadhora Road, Kala Amb	Orange	Aluminum profile manufacturer	Sadhora Road	1	ETP of Capacity 2 KLD	ETP	Gardening activities	Complying
63	UB Bisucits Pvt. Ltd.	Village Khari, Sadhora road, Kala Amb	Orange	Bakery and confectionery	Sadhora Road	ETP- 8 KLD STP- 7 KLD	ETP of Capacity 10 KLD. STP of capacity 10 KLD	ETP and STP	Reused within plant for gardning activities	Complying
64	JMM Laboratories	Sadhora Road Kala Amb.	Orange	Pharmaceutical formulation	Sadhora Road	4	ETP of Capacity 8 KLD	ETP	Reused within plant for irrigation activities	Complying
65	Digital Vision.	Village Ogli, Kala Amb	Orange	Pharmaceutical formulation	Ogli	1.2	ETP of Capacity 2.5 KLD	ETP	Reused in gardening activities	Complying
66	Helpzyn Pharma	Nahan Road, Kala Amb.	Orange	Pharmaceutical formulation	Ogli	2	ETP of capacity 5 KLD	Evaporator after ETP		Complying
67	Myron Industries	Village Ogli, Nahan Road, Kala Amb	Red	Electric Ceiling Fan's Manufacturer	Ogli	0.5	ETP of Capacity 1 KLD	ETP	Recycle/Reuse	Complying
68	Progressive Industries	Village Ogli, Nahan Road, Kala Amb	Orange	LPG Cylinders	Ogli	2	ETP of Capacity 7 KLD	ETP	Gardening activities within unit	Complying
69	Vashishat Chemical.	Nahan Road Kala Amb.	Orange	Lime manufacturing	Ogli	42	ETP of Capacity 50 KLD	ETP	Recycled	Complying
70	Events Corporation, Unit-II	Village Ogli, Nahan Road, Kala Amb	Orange	Pharmaceutical formulation	Ogli	2	ETP of capacity 4 KLD	ETP	Gardening activities within unit	Unit Closed
71	Bimal Industries unit-II	IA kala amb	Red	Aluminum Milk Canes and Water Coolers	Khairi	2.8	ETP of Capacity 5 KLD	Evaporator after ETP		Complying
72	GMT Machine Tools	Village Johron, Kala Amb	Orange	Pharmaceutical formulation	Khairi	3	ETP of Capacity 5 KLD	ETP	Reused with unit for irrigation activities	Complying
73	Grampus Laboratories.	Vill. Johoron, Kala Amb.	Orange	Pharmaceutical formulation	Khairi	4	ETP of Capacity 10 KLD	ETP	Used for gardening activities	Complying
74	Him Sagar Laboratories.	Village Kheri, Trilokpur Road, Kala Amb.	Orange	Pharmaceutical formulation	Khairi	1	ETP of Capacity 2 KLD	Evaporator after ETP		Complying
75	JHS Svendgard Laboratories ltd.	Village Kheri, Trilokpur Road, Kala Amb.	Orange	Mouthwash, toothpaste and teeth whitening gel	Khairi	3	ETP of Capacity 50 KLD STP of capacity 10 KLD	ETP and STP	Rused within plant for gardening activities	Complying
76	MBC Industries	Kala Amb	Orange	Pharmaceutical formulation	Khairi	1.5	ETP of Capacity 5 KLD	ETP	Gardening activities	1st Show Cause notice Issued
77	MK Auto Clutch Co.	Villahe Kheri, Kala Amb	Red	Auto Parts	Khairi	1	ETP of Capacity 2 KLD	ETP	Gardening activities and cooling tower	Complying
78	Pashupati Spinning & Weaving Mills.	Village Kheri, Trilokpur Road, Kala Amb.	Red	Polyster Yarn manufacturing	Khairi	ETP-180 STP- 10	ETP of Capacity 200 KLD STP- 20 KLD	ETP and STP	Gardening activities with unit premises	Complying
79	Pioneer Embroideries.	Vill. Kheri, Kala Amb.	Orange	Dyed Yarn/Thread (without dyeing and processing)	Khairi	16	STP of Capacity 40 KLD	STP	Reused within unit for irrigation activities	Complying
80	Pushkar Pharma.	Village Kheri, Meerpur Road, Kala Amb.	Orange	Pharmaceutical formulation	Khairi	1.5	ETP of Capacity 3 KLD	ETP	Irrigation within unit premises	Complying
81	Sai Corporation	Village Johron, Kala Amb	Orange	Cosmetic Productsm, cleaner, detergent, spray	Khairi	10	ETP cum STP of Capacity 20 KLD	ETP cum STP	Gardening and toilet flushing	Complying

List of water polluting industries along with their final disposal and their compliance status of Himachal Pradesh										
										Annexure-H
Sr. No.	Name of the unit	Address	Category	Industry Type	Catchment Area	Daily Waste Water Generation (KL)	Mode of Treatment	Effluent Treatment System Details	Final Mode of Disposal	Compliance Status
82	Sai Tech Pharmaceuticals.	Vill. Kheri Trilokpur Road, Kala Amb	Orange	Pharmaceutical formulation	Khairi	ETP- 20	ETP of Capacity 20 KLD, STP of capacity 15 KLD	ETP and STP		Complying
83	Varav Biogenesysis P. Ltd	Village Johron, Kala Amb	Orange	Pharmaceutical formulation	Khairi	2	ETP of Capacity 6 KLD	ETP	Used in toilet flushing	Complying
84	Vidyasha Pharmaceuticals	Vilage Johron, Kala Amb	Orange	Pharmaceutical formulation	Khairi	2	ETP of capacity 5 KLD	Evaporator after ETP		Complying
85	Indo Herbal Extractions	Village Meerpur, Kala Amb	Orange	Herbal Extraction	Meerpur	1	ETP of capacity 5 KLD	Evaporator after ETP		Complying
86	Metero Decorative	Sudhora Road, Kala Amn	Orange	MDF Board, Particle Board and Aluminum Composite Panels	Sadhora Road	11	ETP of capacity 70 KLD	ETP	Reused within plant for irrigation activities	Complying
87	Vellinton Healthcare	Rampur Jattan, Kala Amb	Orange	Pharmaceutical formulation	Jattan Wala	2.5	ETP of capacity 15 KLD	ETP	Reused within plant for irrigation activities	Complying
88	Mediking Lifescience	Suketi Road, Kala Amb.	Orange	Pharmaceutical formulation	Suketi Road	3	ETP of capacity 5 KLD	ETP	Gardening activities within unit and toilet flushing	Complying
89	Ayush Herbal & Healthcare Unit II	Suketi Road, Kala Amb.	Orange	Herbal Extraction	Suketi Road	3	ETP of capacity 5 KLD	ETP	Used in gardening activities	Complying
90	Kirvsvy Pharmaceuticals Pvt. Ltd.	Suketi Road, Kala Amb.	Orange	Pharmaceutical formulation	Suketi Road	4	ETP cum STP of capacity 8 KLD	ETP cum STP	Used in gardening activities	Complying
91	Dsa remedies pvt. Ltd	Vilage Moginand, Kala Amb	Orange	Pharmaceutical formulation	Moginand	0.2	Evaporator	Evaporator only		Complying
92	Caspion Pharma	Suketi Road, Kala Amb.	Orange	Pharmaceutical formulation	Suketi Road	1.5	ETP of capacity 5 KLD	ETP cum STP	Reused within plant for irrigation activities	Complying
93	Somadil Biotech	Sudhora Road, Kala Amn	Orange	Pharmaceutical formulation	Sadhora Road	3	ETP cum STP of capacity 5 KLD	ETP	Gardening within unit	Complying
94	Shree Krishna Packaging	Trilokpur Road Kala Amb.	Red	LPG Cylinders	Khairi	1.5	ETP of capacity 3 KLD	ETP	Recyled/Reuse	Complying
95	Alencure Biotech	Suketi Road Kala Amb	Orange	Pharmaceutical formulation	Suketi Road	2	ETP of capacity 5 KLD	ETP	Reused within plant for irrigation activities	1st Show Cause notice Issued
96	HK Industries	Village Kheri, Trilokpur Road	Red	Cookware and Pressure cooker manufacturing	Khairi	1.5	ETP of capacity 2 KLD	ETP	Used in gardening activities	Complying
97	Sunstar Industries	Village Johron, Kala Amb	Red	assembly of Electric Iron, Fans and Mixer/Grinder	Johron	3	ETP of capacity 5 KLD	ETP	Used for gradening activities within unit	Complying
98	SG Engineer	Meerpur kolta Road, Kala Amb	Red	Prefabricated Shelters	Meerpur Kolta	1	ETP of capacity 2 KLD	ETP	Used for gradening activities within unit	Complying
99	Nibvir Pharma	Suketi Road kala Amb	Orange	Pharmaceutical formulation	Suketi Road	1	ETP of capacity 5 KLD	ETP	Reused in gardening activities	Complying
100	Enrobage India Pvt Ltd.	Nahan Road, Kala Amb.	Orange	Pharmaceutical formulation	Nahan Raod	0.4	Evaporator of capacity 45 liters per hour	Evaporator		Complying
101	Astrazen Pharmaceuticals	Mainthapal, Kala Amb	Orange	Pharmaceutical formulation	Mainthapal	1	ETP of capacity 3 KLD	RO after ETP	Recyled/Reuse	1st Show Cause notice Issued
102	Himalyan College (Maa Sarswati Educational Trust)	Sudhora Road, Kala Amn	Red	Educational Institute	Suketi Road	100	STP of capacity 150 KLD	STP	Used for irrigation activities within premises	Complying
103	Rajshree Fabrics	Trilokpur Road Kala Amb.	Green	Non Woven Fabrics	Rampur Jattan	4	STP of capacity 10 KLD	STP	Gardening activities within unit premises	Complying
104	Vimal Industries	Rampur Jattan, Kala Amb	Orange	Non Woven Spun Bond Fabric	Rampur Jattan	4	STP of capacity 10 KLD	STP	Gardening activities within unit premises	Complying
105	Anagad Enterprises	Trilokpur Road Kala Amb.	Orange	Card Board Boxed and allied boxes components	Rampur Jattan	ETP- 0.5 STP- 3.6	ETP of capacity 1 KLD, STP of capacity 10 KLD	ETP and STP	Gardening activities within unit premises	Complying

❖ Operational Efficacy and compliance Status of existing STPs in Districts of Panchkula, Ambala, Kurukshetra and Kaithal in Haryana

Sr. No.	Name and District of STPs	Deptt.	Existing STP and Capacity (MLD)	Date of sampling	Latest Compliance Status
Ambala					
1	3.00 MLD STP at Naya Gaon, Unit I, Ambala City	PHED	3	28.08.2023	Non-Complying
2	3.25 MLD STP at Naya Gaon, Unit II Ambala City	PHED	3.25	28.08.2023	Non-Complying
3	5 MLD Baldev Nagar, Unit I, Ambala City	PHED	5	16.08.2023	Non-Complying
4	3.25 MLD STP at Baldev Nagar, Unit II, Ambala City	PHED	3.25	16.08.2023	Non-Complying
5	5 MLD at Moti Nagar, Unit.I, Ambala City	PHED	5	28.08.2023	Non-Complying
6	5 MLD STP at Moti Nagar, Unit.II, Ambala City	PHED	5	28.08.2023	Non-Complying
7	6 MLD STP at Modal Town, Ambala City	PHED	6	28.08.2023	Complying
8	3.25 at Nasirpur, Ambala City	PHED	3.25	28.08.2023	Non-Complying
9	0.25 MLD at Sadopur , Ambala City	PHED	0.25	30.06.2023	Complying
10	3.00 MLD at Devi Nagar , Ambala City	PHED	3	30.06.2023	Non-Complying
11	3 MLD STP at Nariangarh , Ambala	PHED	3	16.08.2023	Non-Complying
12	2 MLD STP at Sec.7 , Urban Estate, Ambala City	HSVP	2	14.08.2023	Complying
13	5 MLD STP at Sector 21, Ambala City	HSVP	5	14.08.2023	Complying
14	4 MLD STP Barara	ULBD	4		Complying
Kurukshetra					
15	25 MLD STP Thanesar, Kurukshetra by PHED in 31.05.2019	PHED	25	24.08.2023	Complying
16	8 MLD STP Model Town, Pehowa Kurukshetra by PHED in May dt. 2015	PHED	8	24.08.2023	Non-Complying
17	11.5 MLD STP Ladwa Road , Shahbad Kurukshetra by PHED in May, 2016	PHED	11.5	24.08.2023	Complying
18	15 MLD STP Kurukshetra by HSVP	HSVP	15	29.08.2023	Complying
Panchkula					
19	4.5 MLD Kalka Panchkula by PHED in 30.3.2015	PHED	4.5	14.08.2023	Non-Complying
20	0.25 MLD Kalka Panchkula by PHED in 28.5. 2017	PHED	0.25	14.08.2023	Non-Complying
21	5 MLD STP Nalagarh Road, Manakpur, Pinjore Panchkula by PHED 31.1.2015	PHED	5	14.08.2023	Complying
22	18 MLD STP Panchkula by HUDA in 31.12.2002	HSVP	18	17.08.2023	Complying
23	39 MLD STP Panchkula by HUDA in Nov. 2011	HSVP	39	17.08.2023	Complying
24	15 MLD STP Sector- 28, Panchkula by HUDA in 2012	HSVP	15	18.08.2023	Complying
25	Nangal & Alipur	ULBD	0.5		Complying
26	Kot	ULBD	0.75		Complying
27	Khagesara & Toka	ULBD	0.5		Complying
28	Khatoli	ULBD	0.75		Complying
29	Billa	ULBD	0.75		Complying
30	Sukhdarshanpur	ULBD	0.75		Complying
31	Saketri	ULBD	1.5		Complying
32	Ramgarh	ULBD	1		Complying

Sr. No.	Name and District of STPs	416 Deptt.	Existing STP and Capacity (MLD)	Date of sampling	Latest Compliance Status
33	9 MLD STP Garrison Engineer, Chandimandir Panchkula in April 2012	GE	9	14.08.2023	Complying
Kaithal					
34	10 MLD STP Cheeka, Kaithal by PHED in 1.4.2013	PHED	10	28.08.2023	Complying
35	10 MLD STP , Jind Road Kaithal by PHED in September , 2012	PHED	10	28.08.2023	Complying
36	10 MLD STP Manas Road, Kaithal by PHED in June , 2006 (MBBR)	PHED	10	28.08.2023	Complying
37	10 MLD Manas Road,Kaithal bby PHED in Sep , 2012 (SBR)	PHED	10	28.08.2023	Complying
38	5 MLD STP Kalayat , Kaithal by PHED in 1.4.2014	PHED	5	24.07.2023	Complying
39	3.5 Pundri Kaithal by PHED in 4.7.2014	PHED	3.5	28.08.2023	Complying
40	7.5 MLD Kaithal by HUDA in 31.8.2016	HSVP	7.5	28.08.2023	Complying
	Total No. of STPs- 40		269.75 MLD		

List of water polluting industries along with their final disposal and their compliance status of Haryana

Annexure J

Sr. No.	Unit Name	Unit Address	Consent Status	Product /Process	Category	SSI/Medium/Large	Catchment Area of River	Status of installation of ETP/STP	Quantum of Effluent Generation (KLD)		Mode of Disposal	
									Domestic Effluent	Trade Effluent	Domestic Effluent	Trade Effluent
A. District Ambala												
1	M/s Eakansh Wheels	Eakansh Wheels, NH-7, Near HP Petrol Pump, Naraingarh District Ambala	Valid upto - 31.03.2031	Authorized Service station for automobiles	ORANGE	SSI	River Markanda	ETP	2	3	Septic Tank	Recycling/Reusing in washing
2	M/s CHOPRA ELECTROPLATING WORKS	124, VIKASH PURI, PO INDUSTRIAL AREA AMBALA CANTT	Valid upto- 30.09.2025	ELECTROPLATING	RED	SSI	River Tangri Which is further merging into River Markanda	ETP	0.2	0.007	Drain	Reuse in process after treatment
3	M/s Oasis Commercial Pvt Ltd	Village Jatwar Tehsil Naraingarh Distt Ambala	Valid upto- 30.09.2026	Distillery (molasses / grain / yeast based) for manufacturing of rectified spirit/ENA- 120 Metric Tonnes/Day	RED	Large	River Tangri Which is further merging into River Markanda	ETP-cum-STP	20	850	Reuse in process after treatment (ZLD)	Reuse in process after treatment (ZLD)
4	M/s Oasis Overseas Exports Pvt. Ltd.	Village Jatwar Tehsil Naraingarh Distt Ambala	Valid upto- 30.09.2026	Distillery (molasses / grain / yeast based)	RED	Large	River Tangri Which is further merging into River Markanda	ETP	15	500	Reuse in process after treatment (ZLD)	Reuse in process after treatment (ZLD)
5	M/s Durga Enterprises	Khasra No. 63, Khatoni No. 1248, Naraingarh Road, Kala Amb, Tehsil Naraingarh, District Ambala	Valid upto - 31.03.2025	Printing or etching of glass sheet using hydrofluoric acid	ORANGE	SSI	River Markanda	ETP	0.5	1.5	Septic Tank	Recycling/Reusing in the Process
6	M/s Axiom Ayurveda Pvt Ltd.	Ward No 15, Rampur-Sarsehri Road, Ambala Cantt.	Valid upto - 31.03.2030	Ayurvedic and homeopathic medicine	ORANGE	SSI	River Tangri Which is further merging into River Markanda	ETP	1	5	Septic Tank	For irrigation/ Public Sewer after treatment
7	M/s NARAINGARH SUGAR MILLS LTD	VPO BANONDI TEHSI NARAINGARH	Valid upto- 30.09.2024	Sugar Mill	RED	Large	River Markanda	ETP & STP	48	550	For irrigation after treatment	For irrigation after treatment
8	M/s Partap Fabrics Pvt. Ltd.,	V.P.O. Kesri, Saha-Shahabad Highway, Ambala	Valid upto- 30.09.2025	DENIM FABRICS- 40 Metric Tonnes/Day	RED	Large	River Markanda	ETP & STP	22	90	Evaporation by M.E.E and irrigation	Evaporation by M.E.E and irrigation
9	M/s N.V.International Pvt. Ltd.,	Village Badholi, Tehsil Naraingarh, District Ambala	Valid upto- 30.09.2025	Distillery (molasses / grain / yeast based) for manufacturing of Extra Neutral Alcohol Rectified Spirit- 45 Metric Tonnes/Day	RED	Large	River Begna Which is further merging into River Markanda	Common ETP	20	350	Reuse in process after treatment (ZLD)	Reuse in process after treatment (ZLD)
10	M/s N V Distilleries Limited	Village badholi, teh naraingarh, Ambala	Valid upto- 30.09.2024	Distillery including fermentation industry	RED	Large	River Begna Which is further merging into River Markanda	Common ETP	2	180	Reuse in process after treatment (ZLD)	Reuse in process after treatment (ZLD)
11	M/s Paradeep Fertichem Industry Pvt Ltd	Village Patvi Post office Jatwar Naraingarh Ambala	Valid upto - 31.03.2027	Formulation of Pesticides	ORANGE	SSI	River Tangri Which is further merging into River Markanda	ETP	0.9	0.5	Septic Tank	Recycling/Reusing in the Horticulture
12	M/s Rock and Storm Bottlers Private Limited	Village Kesri Saha Shahbad Road Saha Ambala	Valid upto - 31.03.2024	Potable alcohol (IMFL) by blending, bottling of alcoholic products (capital investment on plant & machinery < 1 crore)	ORANGE	SSI	River Markanda	ETP	2	8	Septic Tank	For irrigation after treatment
13	M/s B V BIO CORP PVT LTD	VILLAGE PATVI,P.O. JATWAR,TEHSIL NARAINGARH, DISTRICT AMBALA	Valid upto - 31.03.2028	Liquid floor cleaner, black phenyl, liquid soap, glycerol mono-stearate manufacturing	ORANGE	SSI	River Tangri Which is further merging into River Markanda	ETP	0.6	0.6	Septic Tank	For irrigation after treatment
14	M/s GALAXY GLOBAL EDUCATIONAL TRUST	VILL DINARPUR, Ambala	Valid upto - 31.03.2027	Units having discharges of 10 KL or more	ORANGE	Large	River Markanda	STP	67	NA	For irrigation after treatment	NA
15	M/s Rudraksh Envirocare Pvt Ltd	V & PO Bhadog, Tehsil Naraingarh, District Ambala, Haryana	Valid upto- 30.09.2027	Common treatment and disposal facilities(CETP, TSDF, E- waste recycling, CBMWTF, effluent conveyance project, incinerator, solvent/acid recovery plant, MSW sanitary land fill site)	RED	SSI	River Tangri Which is further merging into River Markanda	ETP	1	0.3	Septic Tank	Re-use and Plantation
16	M/s MM CONTINENTAL	NH-73, AMBALA JAGADHRI HIGHWAY MULLANA, DISTT AMBALA	Valid upto - 31.03.2026	Hotels (Less than 3 star)	ORANGE	Large	River Markanda	STP	30	NA	For irrigation after treatment	NA

17	M/s Elechem Bio Sciences Private Limited	Village Jatwar Tehsil Naraingarh District Ambala	Valid upto - 31.03.2032	Formulation of Pesticides	ORANGE	SSI	River Tangri Which is further merging into River Markanda	ETP	0.3	0.5	Septic Tank	Solar Evaporation pond
18	M/s Hotel Aashiana	Indira Colony, Behind indian roller, Jagadhri road, ambala Cantt	Valid upto - 31.12.2031	Hotels (Less then 3 star)	GREEN	SSI	River Tangri Which is further merging into River Markanda	ETP	1	3	Septic Tank	For Plantation/Gardening/ Horticulture after treatment
19	M/s Hotel Indian Roller	Jagadhri Road, Ambala Cantt.	Valid upto - 31.12.2031	Hotels (Less then 3 star)	GREEN	SSI	River Tangri Which is further merging into River Markanda	ETP	1	5	Septic Tank	For Plantation/Gardening/ Horticulture after treatment
20	M/s Oasis Ethanol Industries Private Limited	Vill Jatwar, Block Shahzadpur, Tehsil Naraingarh, Ambala	Valid upto- 30.09.2027	Distillery (molasses / grain / yeast based) for manufacturing of ETHANOL 320 Kilo liters/Day, Biomass based Co Gen Power Plant 14.4 Megawatt	RED	Large	River Tangri Which is further merging into River Markanda	Common ETP	20	2160	Reuse in process after treatment (ZLD)	Reuse in process after treatment (ZLD)
21	M/s Hotel the Palm	155, Gobind Nagar, ambala Cantt.	Valid upto - 31.12.2032	Hotels (Less then 3 star)	GREEN	SSI	River Tangri Which is further merging into River Markanda	ETP	1	5	Septic Tank	For irrigation after treatment
22	M/s DE VANSH BANQUET	VPO KHUDDA KALAN, AMBALA CANTT	Valid upto - 31.12.2032	Banquet Hall	GREEN	SSI	River Tangri Which is further merging into River Markanda	ETP	0.5	3	Septic Tank	For irrigation after treatment
23	M/s Racsan Foods Private Limited	Village Nagawan, Bhareri Road, Naraingarh	Valid upto - 31.03.2027	Manufacturing of Starch/Sago	ORANGE	Medium	River Begna Which is further merging into River Markanda	ETP	3	130	Septic Tank	Recycling/Reusing in the Process
24	M/s Scalene international	425 A to 428 A Mahesh Nagar Ambala cantt	Valid upto - 31.12.2037	Hotels (Less then 3 star)	GREEN	SSI	River Tangri Which is further merging into River Markanda	ETP	1	2	Public Sewer	For irrigation after treatment
25	M/s CEEON INDIA	NH444-A, VILL- DINARPUR, SAHA TO SHAHABAD ROAD, DISTT- AMBALA, HARYANA	Valid upto- 30.09.2027	Automobile Manufacturing (integrated facilities)	RED	SSI	River Markanda	ETP	0.6	3	Septic Tank	Recycling/Reusing in the Process
26	M/s GLASSCO LABORATORY EQUIPMENTS PVT. LTD.	Village Manglai PO Khudda Kalan District Ambala	Valid upto - 31.12.2027	Glass , ceramic, earthen potteries, tile and tile manufacturing using electrical kiln or not involving fossil fuel kiln	GREEN	Large	River Tangri Which is further merging into River Markanda	ETP & STP	9	1	For irrigation after treatment	For irrigation after treatment
27	M/s JVS Biofuels PVT. LTD.	Village Jatwar Block Shahzadpur Ambala	Valid upto- 30.09.2025	Distillery (molasses / grain / yeast based) for manufacturing of Cogeneration power 4 Megawatt ,Ethanol 120 Kilo liters/Day	RED	Large	River Tangri Which is further merging into River Markanda	ETP/STP	10	400	For irrigation/ Plantation	Recycling/ re-use (ZLD)
28	M/s J.P ELECTROPLATING WORKS	BEECH KI DIGGI, RAMBAG ROAD, ASHARFI BAGH, AMBALA CANTT	Valid upto- 30.09.2025	ELECTROPLATING	RED	SSI	River Tangri Which is further merging into River Markanda	ETP	0.2	0.005	Septic Tank	In to drain after treatment
29	M/s PARKASH ELECTROPLATING WORKS	3375,77, KACHA BAZZAR, AMBALA CANTT	Valid upto- 30.09.2025	ELECTROPLATING	RED	SSI	River Tangri Which is further merging into River Markanda	ETP	0.1	0.002	Septic Tank	In to drain after treatment
30	M/s KAPOOR (BRIGHT) ELECTROPLATING WORKS.	#1085, OLD ALLU GODWON, AMBALA CANTT.	Valid upto- 30.09.2025	ELECTROPLATING	RED	SSI	River Tangri Which is further merging into River Markanda	ETP	0.2	0.006	Septic Tank	In to drain after treatment
31	M/s MODERN ELECTROPLATIG WORKS	3751, HILL ROAD, AMBALA CANTT.	Valid upto- 30.09.2025	ELECTROPLATING	RED	SSI	River Tangri Which is further merging into River Markanda	ETP	0.082	0.006	Septic Tank	In to drain after treatment
32	M/s DHIMAN ELECTROPLATING WORKS	REGD.FROM MC, AMBALA VIDE NO:53	Valid upto- 30.09.2025	ELECTROPLATING	RED	SSI	River Tangri Which is further merging into River Markanda	ETP	0.2	0.005	Septic Tank	In to drain after treatment
33	M/s ARJUN ELECTROPLATING WORKS	12 CROSS ROAD NEAR WATER TANK 1903 AMBALA CANTT	Valid upto- 30.09.2025	ELECTROPLATING	RED	SSI	River Tangri Which is further merging into River Markanda	ETP	0.2	0.007	Septic Tank	In to drain after treatment
34	M/s MAHARISHI MARKENDESHWAR UNIVERSITY (MMU MULLANA)	VILLAGE BHURIA, MULLANA AMBALA	Valid upto- 30.09.2026	Building and construction project having quantity of waste water generation 10 KLD to 100 KLD	ORANGE	Large	River Markanda	STP	1000	NA	For irrigation after treatment	NA
B. District Kurukshetra												
35	M/s Brevena Foods Pvt. Ltd.	Khasra No.1413, 1403, Village Chammu Kalan, Tehsil Ismailabad, Kurukshetra	Valid upto 31/03/2027	Food Product	Orange	Small	River Markanda	ETP	2	10	Septic Tank	For Irrigation
36	Gakhar Alloys	9//6/2/2, Village Chhor, Kurukshetra	Valid upto 30/09/2026	Lead Acid Batteries	Red	Small	River Markanda	ETP	1	5	Septic Tank	For Irrigation

37	Mahalakshmi Motors	Ladwa Road, Tehsil Shahabad Markanda, Kurukshetra	Valid upto 31/03/2032	Service Station	Orange	Small	River Markanda	ETP	1.6	0.8	Public Sewer	Public Sewer
38	Marino Agri Tek Private Limited	VillageKharindwa, Tehsil Shahabad Markanda, District Kurukshetra	Valid upto 31/03/2032	Pesticides	Orange	Small	River Markanda	Solar Evaporation Pond	0.3	0.4	Septic Tank	Recycling/Reuse in the manufacturing process
39	Niva Metals Private Limited	Village Mohan Pur, Near Shahabad Markanda, Kurukshetra	Valid upto 30/09/2026	Lead Acid Batteries	Red	Small	River Markanda	ETP & STP	0.5	2	Septic Tank	Recycling/Reuse
40	Oswal India Agrochemical	Village Rawa, Barara Road, Shahbad Markanda, Kurukshetra	Valid upto 31/03/2026	Pesticides	Orange	Small	River Markanda	ETP	2	1	Septic Tank	For Irrigation
41	Shree Ram Crop Science	Village PO Jhansa, District Kurukshetra	Valid Upto 31/03/2026	Formulation of pesticides	Orange	Small	River Markanda	ETP	0.1	0.1	Septic Tank	Solar Evaporation
42	S.R.V.K. Lead Recycling Plant	Village Dangali, Post Office Jhandheri, Tehsil Shahabad Markanda, Kurukshetra	Valid upto 30/09/2026	Lead Acid Batteries	Red	Small	River Markanda	ETP	1	4	Septic Tank	NA
43	T C AGRO	Village Ajrawar Ismailabad District Kurukshetra	Valid upto 30/09/2023/Applied	Pharmaceuticals	Red	Small	River Markanda	ETP	3	0.2	Septic Tank	Reused for horticulture and irrigation purpose
44	Tanu Agro Industries	Vill. Golpura, Khewat No.57, Khatoni No.139, Khasra No.845, Shahabad Markanda, Kurukshetra	Valid upto 31/03/2026	Formulation of pesticides	Orange	Small	River Markanda	NR	0.3	0.2	Septic Tank	Solar Evaporation
45	The Shahabad Co. Operative Sugar Mills Limited (D.U.)	Village Jhandheri, Tehsil Shahabad District Kurukshetra	Valid upto 30/09/2024	Distillery	Red	Small	River Markanda	ETP & STP	49	1267	Recycling/Reuse in the manufacturing process	Recycling/Reuse
46	The Shahabad Coop Sugar Mills Ltd.	Ladwa Road, Shahabad (M), Kurukshetra	Valid upto 30/09/2024	Sugar Mill	Red	Small	River Markanda	ETP & STP	50	750	on land for irrigation	PHED Sewer leading to 11.5 MLD STP
C.	District Panchkula											
47	Global Infra Developers	NH-7, Village Mouli, Distt. Panchkula	Valid upto 30.09.2026	Industrial Estates/parks/complexes/area	Red	Large	River Tangri	STP	186	0	For Irrigation	NA
48	Flyover Distillers and Bottlers Pvt. Ltd.,	Vill. Bagwala, Tehsil Barwala, Distt. Panchkula	Valid upto 31.03.2024	Non alcoholic Beverages (Bottling Plan)	Orange	Large	River Tangri	ETP	5	5	Septic Tank	For Irrigation
49	Shree Ram Industries	Village Batwal, Sub Tehsil Barwala, Distt. Panchkula	Valid upto 30.09.2025	Lead Metal extraction involving different furnaces	Red	Medium	River Tangri	ETP	2	2	Septic Tank	For Irrigation
50	Vedaang Proteins Pvt. Ltd.,	Dhandaaurru to Khatoli Road, Vill Dhandaaurru, Tehsil Barwala, Panchkula	Valid upto 31.03.2024	Solvent, Vegetable oil manufacturing including solvent	Orange	Large	River Tangri	ETP	2	30	Septic Tank	For Irrigation
51	United Chemicals Industries (Rainbow Crop Health)	VPO Mouli, Panchkula	Valid upto 31.03.2029	Formulation of pesticides	Orange	Small	River Tangri	ETP	0.3	0.5	For Irrigation	For Irrigation
52	ESS KAY HYGIENIC SERVICE	VILL. BAGWALA, DISTT PANCHKULA	Valid upto 30.09.2026	CBMWTF/Service Provider	Red	Small	River Tangri	ETP	1.5	2	Septic Tank	Recycling/Reused
53	Rebuild Energy	VPO Mouli, Tehsil Barwala, Distt. Panchkula	Valid Upto 30.09.2024	Recycling of used lead acid batteries	Red	Small	River Tangri	ETP	1	1	Septic Tank	For Irrigation
54	Exitto Gourment Pvt. Ltd.,	Village- Golpura, Barwala, District Panchkula	Valid Upto 31.03.2026	Recycling of used lead acid batteries	Orange	Large	River Tangri	ETP	0.75	19	Septic Tank	For Irrigation
55	Kailash Industries	Vill. Batwal, Tehsil Barwala, Distt. Panchkula	Valid upto 30.09.2025	Lead Unit-Industry engaged in recycling/reprocessing/revolve/rv/reuse	Orange	Large	River Tangri	ETP	0.3	0.2	Septic Tank	Recycling/Reuse
56	CAS Motors	Khasra No. 30/22/1, 23/1/2, 30//19/2/2, 20/1, Baghwali, Distt. Panchkula	Valid upto 31.03.2025	Automobile servicing, repairing	Orange	Small	River Tangri	ETP	0.5	5	Septic Tank	For Irrigation
57	A.K. Steels	Vill. Bataur, Tehsil Barwala, Distt. Panchkula	Valid Upto 30.09.2025	Industries engaged in recycling/reprocessing	Red	Small	River Tangri	ETP	0.5	4.5	For Irrigation	Recycline/Reuse
58	Damaira Pharmaceuticals Pvt. Ltd.	VPO- Hariipur, Tehsil-Raipur Rani, District-Panchkula	Valid Upto 31.03.2027	Pharmaceutical Formulation and for R & D Purpose	Orange	Large	River Tangri	STP/ETP	10	10	Recycling/Reuse	Recycling/Reuse
59	Stylam Industries Ltd.	Manak Tabra, Raipur Rani, Panchkula	Valid upto 31.03.2025	Ply board Manufacturing (including veneer and laminate)	Orange	Large	River Tangri	STP	10	0	For Irrigation	NA
60	Modern Steel Industry	Khewat No. 43, Barwala Raipur Rani Road, Vill-Sarakpur, Tehsil-Raipur Rani, District-Panchkula	Valid upto 30.09.2026	Industry or processes involving foundry operations	Red	Medium	River Tangri	ETP	0.5	1	Septic Tank	Recycling/Reuse
61	AHU Laboratories Pvt. Ltd.,	Khasra No. 45//6 7 8, 45//8, Vill. Hariipur, Tehsil Raipur Rani, Panchkula	Valid upto 31.03.2024	Pharmaceuticals formulation and for R & D	Orange	Large	River Tangri	STP/ETP	15	50	Recycling/Reuse	For Irrigation

62	Lala Birkha Ram Medical Research and Educational Soc.,	Golpura, Panchkula	Valid upto 31.03.2022 and refused	Educational Institute having STP capacity 10 KLD or more but less than 100 KLD	Orange	Medium	River Tangri	STP	5	0	For Irrigation	NA
63	M.G. Petrochem Pvt. Ltd.,	Village Ferozpur, Tehsil Raiapur Rani, Distt. Panchkula	Valid upto 30.09.2027	Ethanol Industry-----Distillery (molasses/grain/yeast based)	Red	Large	River Tangri	STP/ETP	30	1097	For Irrigation	For Irrigation
64	Inflame Appliances Limited,	Vill. Bagwali, Tehsil Panchkula	Valid upto 31.03.2024	Power Press and Spray Painting, Paint Baking	Orange	Large	River Tangri	STP/ETP	10	10	For Irrigation	For Irrigation
65	Irle Kay Jay Rolls Private Limited	Village-Bagwali, Nh-7, Tehsil-Barwala, District-Panchkula	Valid upto 31.03.2032	(Foundry) Sewage Treatment Plant	Orange	Large	River Tangri	STP	10	0	For Irrigation	NA
66	Rudra Smelting Industries,	Vill. Haripur, Distt. Panchkula	Valid upto 30.09.2026	Recycling of used lead acid batteries	Red	Small	River Tangri	ETP	1	2	Septic Tank	Onland to percolate
67	Unitech Power Systems,	Vill. Hangoli, The. Raipur Rani, Distt. Panchkula.	Valid upto 30.09.2026	Industry or process involving metal surface treatment or process	Red	Medium	River Tangri	ETP	2	3	Septic Tank	For Irrigation
68	Shiwaksh Enterprises,	VPO Garhikotaha, Panchkula	Valid upto 30.09.2024	Industries engaged in recycling/reprocessing/recovery	Red	Small	River Tangri	ETP	0.5	1.5	Septic Tank	For Irrigation
69	Innovative Polymers,	Vill. Mouli, Barwala, Panchkula	Valid upto 31.03.2031	Rubber Goods Industry	Orange	Small	River Tangri	ETP	0.5	0.5	Septic Tank	Onland to percolate
70	Shreee Balaji Furniture Industries,	Vill. Sarakpur, Naraingarh Road, Panchkula	Valid upto 31.03.2032	Polythene and plastic processed	Green	Small	River Tangri	ETP	0.2	0.2	Septic Tank	For Irrigation
D.	District Kaithal											
NIL, as no industry falling in catchment area of River Markanda or its tributaries												

Annexure K

Photograph 1 and 2: Discharge of Industrial Effluent in Markanda River



Bottom Image No. 3 Muddish Discharge of Screening and Washing plants situated in Village Dera, Haryana

Photographs 3, 4, 5 & 6: Dumping of lime sludge/waste on the banks of Markanda River





Photograph 7 and 8: Sand Mining in Markanda River at Kalaamb area of Haryana

