



Punjab Pollution Control Board

Regional Office-III

M.C. Complex, 2nd Floor, Block-C, Gill Road, Ludhiana

Tel. 0161-2540450

No. 1522

Date 15-9-2019

To

The Registrar,
National Green Tribunal,
Faridkot House, Copernicus Marg, Near India Gate,
New Delhi, 110001.

Subject: Orders dated 25.04.2019 passed by the Hon'ble National Green Tribunal on O.A. 465/2019 (I.A. No. 332/2019) In the matter of Kulwinder Singh Sandhu & Ors. Vs. Ram Murtu & Ors —Compliance report thereof.

It is submitted that the Hon'ble National Green Tribunal vide orders 25.04.2019 passed in O.A. No. 465/2019 (I.A. 332/2019) in the matter of Kulwinder Singh Sandhu & Ors Vs Ram Murti & Ors. has decided as under :-

"4. let a Joint Committee comprising representatives of Central Pollution Control Board (CPCB), PPCB and the District Magistrate, Ludhiana ascertain the facts and ensure proper action by the statutory authorities under the Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986 in accordance with law within two months. The Committee may also assess the compensation for damage to the environment in the last five years and the concerned statutory authorities may take steps to recover the same from the identified polluters in accordance with law. The nodal agency will be the PPCB for coordination and compliance.

5. An action taken report may be furnished by the Committee to this Tribunal within three months by e-mail at judicial-ngt@gov.in."

2. That in pursuance of the Hon'ble NGT orders dated 24.05.2019, the concerned departments nominated the followings officers as members of the Joint Committee:-

- 1) Sh. Amarinder Singh Malhi, the SDM (W), Ludhiana on the behalf of District Magistrate, Ludhiana.
- 2) Sh. J. P. Meena, Scientist "C", CPCB, Regional Directorate, Lucknow on the behalf Central Pollution Control Board.

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- 3) Er. Paramjeet Singh, Environmental Engineer, PPCB, Ludhiana on the behalf Punjab Pollution Control Board.
3. That in further compliance of the said orders dated 25.04.2019 of the Hon'ble Tribunal, the Joint Committee visited the site of Hadda Roddi, at Ladhowal, Ludhiana on 01.07.20019 and again had a meeting on 01.08.2019. The Committee has prepared two reports of visit dated 01.07.2019 and the meeting held on 01.08.2019. Both the reports are enclosed herewith for placing before the Principal Bench in the Hon'ble National Green Tribunal, New Delhi. The next of date of hearing in the case is fixed for 10.10.2019.

It is further submitted that the above said reports are also being sent through email at judicial-ngt@gov.in

DA/As Above

Endst. No


Environmental Engineer

Date:

A copy of the above is forwarded to the Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office-II, Ludhiana for information, please.

DA/As Above


Environmental Engineer

**National Green Tribunal
Principal Bench, New Delhi**

O.A No. 465/2019 (I.A. No. 332/2019)

**In matter of Kulwinder Singh Sandhu & ors. Vs Ram Murti & Ors.
Joint inspection report of Hadda Roddi (Caracass site) located at Village
Ladhowal, Ludhiana, Punjab**

Sh Kulwinder Singh Sandhu & ors filed a complaint in Hon'ble NGT vs Ram Murti & ors on 6th March, 2019. The Hon'ble NGT in its orders dt 24.5.2019 decided as under:

"4. let a Joint Committee comprising representatives of Central Pollution Control Board (CPCB), PPCB and the District Magistrate, Ludhiana ascertain the facts and ensure proper action by the statutory authorities under the Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986 in accordance with law within two months. The Committee may also assess the compensation for damage to the environment in the last five years and the concerned statutory authorities may take steps to recover the same from the identified polluters in accordance with law. The nodal agency will be the PPCB for coordination and compliance.

5. An action taken report may be furnished by the Committee to this Tribunal within three months by e-mail at judicial-ngt@gov.in."

In pursuance of the Hon'ble NGT orders dt 24.5.2019, a joint committee comprising of representatives of Central Pollution Control Board (CPCB), Punjab Pollution Control Board (PPCB), District Magistrate Ludhiana carried out an inspection and monitoring of Hadda Roddi site on 01.07.2019 and on 02.07.2019 to ascertain the facts. The team comprised of following members:

- 1) Sh J. P. Meena, Scientist "C", CPCB, Regional Directorate, Lucknow.
- 2) Er Paramjeet Singh, Environmental Engineer, PPCB, Ludhiana.
- 3) Sh. Amarinder Singh Malhi, the SDM (W), Ludhiana.

At the time of visit Sh Amandeep Singh AEE, PPCB, Sh Janak Raj, ASO, PPCB and Sh Jagpal Singh, Kanoogo were also present.

During the visit the team collected the secondary information from the persons present at site and the following observations were made:

- i. There are five Hadda Roddi plants which are located on the bank of River Sutlej near village Ladhawal, Ludhiana. These are located adjacent to each other in an area of about 5.5 acres. At site no demarcation is made by the said units. At the time of visit the Hadda Roddi were in operation.
- ii. As per the persons present at site these plants are run by five owners i.e. Sh Parshotam Lal, Sh Munish Kumar, Sh Ramesh Kumar, Sh Ram Murti and Sh Suraj Kumar.
- iii. It was informed that dead animals are received at site from the Ludhiana city and surrounding villages in a periphery of about 25-30 kms.
- iv. All these plants having engaged in same operations at site. All activities are carried out manually by the labour.
- v. The skin/hides and the fleshing of the dead animals is removed manually and reportedly the skin/hides are sold to the leather processing units. Whereas, the bones are sold separately to the traders for further processing. None of the units provided any records relating to their business.
- vi. The fleshing and other waste thus generated are disposed of in open area unscientifically causing attraction of stray dogs and flies leading to the odour problem and nuisance in the area. For the control of odour no mitigation measure were adopted by the owners of Hadda Roddi.
- vii. The dead animals, carcasses and the left over wastes were lying in open in unlined area.
- viii. Some parts of the animals were washed in small plastic drums of about 100lt cap each. To check the quality of this effluent a sample was collected by the team. As reported these parts are then sun dried and sold in the local market. To meet with their water requirement, total 5 hand pumps are installed at site. To assess the quality of ground water, the team had collected a sample from one of these hand pumps. As a reference point, sample of another hand pump located at the upstream of these sites was also collected.
- ix. Above washing effluents and sullage water generated which is about 2.5 KL/day is discharged without treatment through open drains leading to river Sutlej. At the time of visit this effluent was not reaching the river but was

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stagnating near the river bed. During visit the team had collected a sample of effluent from this stagnation point. During rains this stagnating effluent may also flow into the river.

- x. There was no machinery/ furnace at site for boiling of carcass for any processing/extraction of tallow oil etc.
- xi. To check the quality of river water, sample from the upstream and downstream of the site of Hadda Roddi were also collected.
- xii. During visit, team was interacted with the local residents, Sh. Surmal Singh, a resident of the area, informed that it is very hard to live in the area due to foul smell of the Hadda Roddi site.
- xiii. On 2.7.2019, the team tried to contact Sh. Kulwinder Singh Sandhu, the complainant in this case, and it came to notice that he is out of station, so he was contacted on his mobile phone. He informed that foul smell from Hadda Roddi site causing nuisance in the area.
- xiv. On 02.07.2019 the team along with Dr. Y.P Singh, Senior Veterinary Officer, Municipal Corporation Ludhiana, visited the site where the MCL has submitted proposal to install Scientifically Designed Carcass plant at Village Noorpur Bet, Hambran Road, Ludhiana.

Findings

1. The team had physically verified the facts at site as above.
2. The results of samples collected by the team on 1.7.2019 are under process and the results are awaited.
3. As per the decisions of the Personal Hearing given by the Chairman of the Punjab Pollution Control Board on 07.06.2018, the Municipal Corporation has not established the modern and scientific carcass utilization plant at Noorpur Bet Ludhiana, the NOC for which has already been granted by Punjab Pollution Control Board. At site the work regarding installation of said plant is yet to be started by the Municipal Corporation Ludhiana. Dr. Y.P Singh, Senior Veterinary Officer, Municipal Corporation Ludhiana informed that work for the installation of the said plant has been allotted to M/s Ess Bee Enterprises, Greater Noida, UP. LOI has been issued on 1.7.2019 and the agreement will be signed

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within 21 days. The plant will be commissioned within one year from the date of agreement,.

4. As verified by Sh Jagpal Singh Kanoogo, the land on which the Hadda Roddi are situated belongs to Central Government. Copy of the Jamabandi & Plan prepared is enclosed as Annexure.
5. The Municipal Corporation Ludhiana shall be asked a time bound plan for setting up of modern & scientific carcass rendering plant.
6. To review the proper actions by the statutory authorities under the Water (Prevention and Control) Act, 1974, Air (Prevention and Control) Act, 1981 and the Environment (Protection) Act, 1986 in accordance with law within 2 months and to assess the compensation, the committee will again meet in the last week of July 2019.

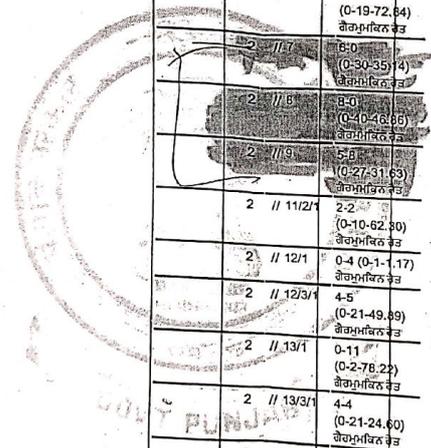
16
Date: 02.07.2019

Inspecting Officers:

Name	Designation	Signature
Amarinder Singh Malhi	SDM (West), on behalf of District Magistrate, Ludhiana	
J. P. Meena	Scientist "C" on behalf of Central Pollution Control Board, Regional Directorate, Lucknow	Jagdish 16/07/2019
Paramjeet Singh	Environmental Engineer on behalf of Punjab Pollution Control Board, Regional Office III, Ludhiana	

ਜਮਾਬੰਦੀ 2012 2013 ਪਿੰਡ- ਮਨੋਵਾਲ... ਹੱਦਬਸਤ ਨੰ:- 113 ਤਹਿਸੀਲ- ਲੁਧਿਆਣਾ ਵੇਸਟ ਜ਼ਿਲਾ- ਲੁਧਿਆਣਾ

1	2	3	4	5	6	7	8
ਖੇਤ ਨੰ./ ਮਾਲ/ਪੱਤੀ/ ਨੰਬਰਦਾਰ	ਖੇਤ ਨੰ./ ਨੰਬਰ/ ਲਗਾਨ	ਮਾਲਕ ਦਾ ਨਾਂ ਅਤੇ ਵੇਰਵਾ	ਕਾਬਜ਼ਕਾਰ ਦਾ ਨਾਂ ਅਤੇ ਵੇਰਵਾ	ਸਿੰਚਾਈ ਦਾ ਸਾਧਨ	ਮੁੱਢਲਾ ਅਤੇ ਖਸਰਾ ਨੰਬਰ	ਰਕਬਾ ਅਤੇ ਕੂ ਦੀ ਕਿਸਮ	ਵਿਸ਼ੇਸ਼ ਕਥਨ
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					2 // 3	8-0 (0-40-46.66) ਕੈਰਮੁਖਿਨ ਚੇਤ	
					2 // 4	3-18 (0-19-72.64) ਕੈਰਮੁਖਿਨ ਚੇਤ	
					2 // 7	8-0 (0-30-35.74) ਕੈਰਮੁਖਿਨ ਚੇਤ	
					2 // 8	8-0 (0-40-46.66) ਕੈਰਮੁਖਿਨ ਚੇਤ	
					2 // 9	5-8 (0-27-31.63) ਕੈਰਮੁਖਿਨ ਚੇਤ	
					2 // 11/2/1	2-2 (0-10-62.80) ਕੈਰਮੁਖਿਨ ਚੇਤ	
					2 // 12/1	0-4 (0-1-1.17) ਕੈਰਮੁਖਿਨ ਚੇਤ	
					2 // 12/3/1	4-5 (0-21-49.69) ਕੈਰਮੁਖਿਨ ਚੇਤ	
					2 // 13/1	0-11 (0-2-78.22) ਕੈਰਮੁਖਿਨ ਚੇਤ	
					2 // 13/3/1	4-4 (0-21-24.60) ਕੈਰਮੁਖਿਨ ਚੇਤ	
					2 // 14/1	0-9 (0-2-27.64) ਕੈਰਮੁਖਿਨ ਚੇਤ	
					2 // 14/3/1	2-5 (0-11-38.18) ਕੈਰਮੁਖਿਨ ਚੇਤ	
					10 // 3/1	0-8 (0-2-2.34) ਕੈਰਮੁਖਿਨ ਚਾਬੜਾ	



ਕਾਬਜ਼ਕਾਰੀ ਦਾ ਨਾਂ/ਮਾਲਕ ਦਾ: ਰਾਮਾ ਐਟਰੀ (ਪਿੰਡੇਰ) ਪਟਵਾਰੀ ਵਲ ਮਾਲ ਪਿਕਾਬਤ ਸੰਗਤ 25/08/2019 ਤਕ ਕਾਮਪੂਰਵਕ ਵਰ ਦਰਜ ਹੋ।
 ਚੀਫ਼ ਓਫਿਸਰ ਮਾਲ ਵਿਕਾਸ ਮੁਕਾਬਿਕ ਨਕਲ ਦੁਕਸਤ ਹੈ।
 ਕਾਬਜ਼ਕਾਰੀ ਦਾ ਹਸਤਾਖਰ

ਜ਼ਮਾਬੰਦੀ- 2012		ਪਿੰਡ- 2013		ਹੱਦਬਸਤ ਨੰ:-		113 ਤਹਿਸੀਲ- ਲਾਹਿਆਣਾ ਏਮਟ		ਜ਼ਿਲਾ- ਲਾਹਿਆਣਾ	
1	2	3	4	5	6	7	8		
ਖੇਵਟ ਨੰ./ ਮਾਲ/ਪੱਤੀ/ ਨੰਬਰਦਾਰ	ਖੇਤੀ ਨੰਬਰ/ ਲਗਾਨ	ਮਾਲਕ ਦਾ ਨਾਂ ਅਤੇ ਵੇਰਵਾ	ਕਾਸਤਕਾਰ ਦਾ ਨਾਂ ਅਤੇ ਵੇਰਵਾ	ਸਿੰਚਾਈ ਦਾ ਸਾਧਨ	ਖੁੱਬਾ ਅਤੇ ਖਸਰਾ ਨੰਬਰ	ਰਕਬਾ ਅਤੇ ਫ਼ੀ ਦੀ ਕਿਸਮ	ਵਿਸ਼ੇਸ਼ ਕਥਨ		
					10 // 8/2	0-8 (0-2-2.34) ਫੈਰਮੁਖਿਕ ਰਾਸਤਾ			
					10 // 13/2	0-8 (0-2-2.34) ਫੈਰਮੁਖਿਕ ਰਾਸਤਾ			
					10 // 18/2/2	0-8 (0-2-2.34) ਫੈਰਮੁਖਿਕ ਰਾਸਤਾ			
					ਕੁਲ ਕਿੱਤੇ 17	50-18 (257-48.12)			
						50 ਕਰਾਲ 18 ਮਰਲਾ (2 ਹੇਕਟੇਅਰ 57 ਏਅਰ 18.12 ਸੈਟੇਅਰ) ਫੈਰਮੁਖਿਕ ਰਾਸਤਾ			
						1 ਕਰਾਲ 12 ਮਰਲਾ (0 ਹੇਕਟੇਅਰ 8 ਏਅਰ 37 ਸੈਟੇਅਰ) ਫੈਰਮੁਖਿਕ ਰਾਸਤਾ			
						49 ਕਰਾਲ 6 ਮਰਲਾ (2 ਹੇਕਟੇਅਰ 49 ਏਅਰ 38.75 ਸੈਟੇਅਰ) ਫੈਰਮੁਖਿਕ ਰਾਸਤਾ			



ਟ੍ਰਾਂਸਮਿਸ਼ਨ ਨੰ 6571 ਕੁੱਲ ਪੰਨੇ: 2 ਕੁੱਲ ਫੀਸ: 46 ਕਰਮਚਾਰੀ ਦਾ ਨਾਮ/ ਮੁਦਾਬਰਾ ਦਾ ਨਾਮ/ ਓਪਰੇਟਰ ਕੰਪਿਊਟਰ ਮਾਲ ਵਿਕਾਸ ਮੁਕਾਬਲੇ ਨਕਲ ਦੁਬਾਰਾ ਹੈ।

ਸਰਕਾਰੀ ਫਾਰਮ ਨੰ: 11 ਸਕੀਮ: 1-2

ਨਿਯਮਿਤ ਗਿਰਦਾਵਰੀ ਜਾਂ ਫ਼ਸਲ ਮੁਆਇਨਾ ਕਿਤਾਬ ਸਾਹਿਬਜ਼ਾਦਾ ਜੀ ਸਾਹਿਬਜ਼ਾਦਾ ਮੁਕਤਸਰ ਪਿੰਡ ਮੁਕਤਸਰ ਜ਼ਿਲ੍ਹਾ ਮੁਕਤਸਰ

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
ਖਾਸ ਨੰਬਰ	ਪਾਸ ਪਾਸਵਰੀ ਨਾਂ ਜਾਂ ਸੰਗਤੀ (ਜਿਹਨਾਂ ਵਾਲੇ)	ਪਾਸ ਪਾਸਵਰੀ ਨਾਂ ਜਾਂ ਸੰਗਤੀ (ਜਿਹਨਾਂ ਵਾਲੇ)	ਗਰਾਮ	ਪਿਛਲੀ ਸਮੁੰਦਰੀ ਮੁਕਾਬਲੇ ਦੀ ਮਿਤੀ	ਸਮੁੰਦਰੀ ਦੀ ਖਾਸ ਅਤੇ ਫ਼ਸਲ ਦਰਮਿਆਨ ਦੀ ਗਿਣਤੀ	ਗਤੀ ਦੀ ਖਾਸ ਅਤੇ ਫ਼ਸਲ ਦਰਮਿਆਨ ਦੀ ਗਿਣਤੀ	ਇਤਫ਼ਾਕ ਹਕੀਮਤ ਬਰਾਬਰ ਖਾਸ ਅਤੇ ਫ਼ਸਲ ਦੀਆਂ ਤਾਰੀਖ਼ਾਂ	ਸਮੁੰਦਰੀ ਦੀ ਖਾਸ ਅਤੇ ਫ਼ਸਲ ਦਰਮਿਆਨ ਦੀ ਗਿਣਤੀ	ਗਤੀ ਦੀ ਖਾਸ ਅਤੇ ਫ਼ਸਲ ਦਰਮਿਆਨ ਦੀ ਗਿਣਤੀ	ਇਤਫ਼ਾਕ ਹਕੀਮਤ ਬਰਾਬਰ ਖਾਸ ਅਤੇ ਫ਼ਸਲ ਦੀਆਂ ਤਾਰੀਖ਼ਾਂ	ਸਮੁੰਦਰੀ ਦੀ ਖਾਸ ਅਤੇ ਫ਼ਸਲ ਦਰਮਿਆਨ ਦੀ ਗਿਣਤੀ	ਗਤੀ ਦੀ ਖਾਸ ਅਤੇ ਫ਼ਸਲ ਦਰਮਿਆਨ ਦੀ ਗਿਣਤੀ	ਇਤਫ਼ਾਕ ਹਕੀਮਤ ਬਰਾਬਰ ਖਾਸ ਅਤੇ ਫ਼ਸਲ ਦੀਆਂ ਤਾਰੀਖ਼ਾਂ	ਸਮੁੰਦਰੀ ਦੀ ਖਾਸ ਅਤੇ ਫ਼ਸਲ ਦਰਮਿਆਨ ਦੀ ਗਿਣਤੀ	ਗਤੀ ਦੀ ਖਾਸ ਅਤੇ ਫ਼ਸਲ ਦਰਮਿਆਨ ਦੀ ਗਿਣਤੀ	ਇਤਫ਼ਾਕ ਹਕੀਮਤ ਬਰਾਬਰ ਖਾਸ ਅਤੇ ਫ਼ਸਲ ਦੀਆਂ ਤਾਰੀਖ਼ਾਂ	ਸਮੁੰਦਰੀ ਦੀ ਖਾਸ ਅਤੇ ਫ਼ਸਲ ਦਰਮਿਆਨ ਦੀ ਗਿਣਤੀ	ਗਤੀ ਦੀ ਖਾਸ ਅਤੇ ਫ਼ਸਲ ਦਰਮਿਆਨ ਦੀ ਗਿਣਤੀ	ਇਤਫ਼ਾਕ ਹਕੀਮਤ ਬਰਾਬਰ ਖਾਸ ਅਤੇ ਫ਼ਸਲ ਦੀਆਂ ਤਾਰੀਖ਼ਾਂ
27	ਮੁਕਤਸਰ	ਮੁਕਤਸਰ	ਮੁਕਤਸਰ	23	23	23	X												
8	ਮੁਕਤਸਰ	ਮੁਕਤਸਰ	ਮੁਕਤਸਰ	23	23	23	X												
9	ਮੁਕਤਸਰ	ਮੁਕਤਸਰ	ਮੁਕਤਸਰ	23	23	23	X												

- 9 -

**National Green Tribunal
Principal Bench, New Delhi**

O.A No. 465/2019 (I.A. No. 332/2019)

In matter of Kulwinder Singh Sandhu & ors. Vs Ram Murti & Ors.

Joint inspection report of Hadda Roddi (Caracass site) located at Village Ladhawal, Ludhiana, Punjab

Background:

Sh Kulwinder Singh Sandhu & ors filed a complaint in Hon'ble NGT vs Ram Murti & ors on 6th March, 2019. The Hon'ble NGT in its orders dt 24.5.2019 decided as under:

"4. let a Joint Committee comprising representatives of Central Pollution Control Board (CPCB), PPCB and the District Magistrate, Ludhiana ascertain the facts and ensure proper action by the statutory authorities under the Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986 in accordance with law within two months. The Committee may also assess the compensation for damage to the environment in the last five years and the concerned statutory authorities may take steps to recover the same from the identified polluters in accordance with law. The nodal agency will be the PPCB for coordination and compliance.

5. An action taken report may be furnished by the Committee to this Tribunal within three months by e-mail at judicial-ngt@gov.in."

In pursuance of the Hon'ble NGT orders dt 24.5.2019, a joint committee comprising of representatives of Central Pollution Control Board (CPCB), Punjab Pollution Control Board (PPCB), District Magistrate Ludhiana carried out an inspection and monitoring of Hadda Roddi site on 01.07.2019 and on 02.07.2019 to ascertain the facts. The team comprised of following members:

- 1) Sh. Amarinder Singh Malhi, SDM (W), Ludhiana.
- 2) Sh J. P. Meena, Scientist "C", CPCB, Regional Directorate, Lucknow.
- 3) Er Paramjeet Singh, Environmental Engineer, PPCB, Ludhiana.

During the first visit of the committee, samples of Ground Water, Surface Water and Effluent were collected. Results of which were awaited, so, the committee decided to meet again in the last week of July, 2019.

Now, the results of the samples have been received and the committee again met on 01.08.2019. The status is as follows:

Effluent Samples:

During the first visit on 01.07.2019, the committee observed that effluent of the washing and sullage is generated from the process. Though at the time of visit the effluent was not reaching the River Sutlej, samples were collected from the stagnation area and from the drum in which the effluent generated from the washing of dead animal parts, was stored. It was reported that this effluent is discharged for final disposal toward river. These samples were analysed by Zonal Laboratory, Punjab Pollution Control Board, Ludhiana. The sample analysis results have been received vide Zonal Laboratory, Ludhiana no. 9929 dt. 11.07.2019. **(Annexure-A)**. The results are tabulated as below:

Sr. No.	Parameter	From stagnated water in drain leading to River Sutlej	Waste water stored in drum and ready for disposal	General Discharge Standards for disposal in inland surface water
1.	pH	7.27	6.65	5.5-9.0
2.	Total Suspended Solids (mg/l)	514	692	100
3.	Total Dissolved Solids (mg/l)	1208	2026	-
4.	Chemical Oxygen Demand (mg/l)	3881	6019	250
5.	Biochemical Oxygen Demand (mg/l)	1650	2750	30
6.	Oil & Grease (mg/l)	102	174	10

It is evident from the above analysis results that all the parameters except pH, are not meeting with the prescribed general standards **(Annexure-B)**. The physical conditions at site revealed that the discharge of untreated effluent from the Hadda Roddi sites cannot be ruled out to reach the River Sutlej during rains and excess of generation of effluent. The discharge of untreated effluents into river may cause damage to aquatic life and toxicity.

Surface Water Samples:

During the first visit on 01.07.2019, to check the quality of river water, sample from 100m upstream and 100m downstream of the site of Hadda Roddi were also collected by the committee. These samples were analysed by Zonal Laboratory, Punjab Pollution Control Board, Ludhiana. The sample analysis results have been received vide Zonal

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Laboratory, Ludhiana no. 9923 dt. 11.07.2019 (Annexure-C). The results are tabulated as below:

Sr. No.	Parameters	River Sutlej at 100 mtrs u/s of Hadda Roddi	River Sutlej at 100 mtrs d/s of Hadda Roddi
1.	pH	8.24	8.29
2.	Total Suspended Solids (mg/l)	13	17
3.	Dissolved Oxygen (mg/l)	7.7	7.6
4.	Total Dissolved Solids (mg/l)	179	183
5.	Chemical Oxygen Demand (mg/l)	6.4	6.8
6.	Biochemical Oxygen Demand (mg/l)	BDL	BDL
7.	Ammonical Nitrogen (mg/l) as NH ₃ -N	1.6	1.6
8.	T-Coli MPN/100ml	680	780
9.	F-Coli MPN/100ml	200	200
10.	Conductivity (µS/cm)	294	305
11.	Chloride (mg/l)	18	19
12.	Sulphate (mg/l)	13	15
13.	Sodium (mg/l)	9.9	12
14.	Potassium (mg/l)	2.3	2.9
15.	Total Alkanity (mg/l)	130	134
16.	Total Hardness (mg/l)	104	110
17.	Calcium (mg/l)	24.8	26.4
18.	Magnesium (mg/l)	10.3	10.8
19.	Turbidity (NTU)	14	16
20.	Phosphate (mg/l)	0.96	1

During the visit of the committee on 01.07.2019, it was observed that no effluent from the Hadda Roddi sites were reaching the River Sutlej, but was stagnating near its bed. The possibility of contamination in the river cannot be ruled out. From the above sample analysis results it is evident that the river water quality from upstream to the downstream of the activities carried out by Hadda Roddi are deteriorating.

Ground Water Samples:

During the first visit on 01.07.2019, to check the quality of ground water, the team had collected a sample from one the hand pumps installed at the Hadda Roddi site. As

a reference point, sample of another hand pump located at the upstream of these sites was also collected. These hand pumps are at shallow depths.

These samples were analysed by Head Office Laboratory, Punjab Pollution Control Board, Patiala. The sample analysis results have been received vide Head Office Laboratory, Patiala no. 20937-38 dt. 12.07.2019 (**Annexure-D**). The results are tabulated as below:

Sr. No.	Parameters	From hand pump within the premises of Hadda Roddi installed at 50 ft depth	From hand pump installed at Peer Baba premises, Sutlej Bridge, Ludhiana (as reference sample)
1.	pH	7.44	7.18
2.	Electrical Conductivity ($\mu\text{S}/\text{cm}$)	289	650
3.	Turbidity (NTU)	BDL	BDL
4.	Total Suspended Solids (mg/l)	BDL	BDL
5.	Total Dissolved Solids (mg/l)	182	397
6.	Chemical Oxygen Demand (mg/l)	BDL	BDL
7.	Biochemical Oxygen Demand (mg/l)	BDL	BDL
8.	Total Alkalinity (mg/l)	104	284
9.	Total Hardness	134	280
10.	Calcium (mg/l)	38.8	50.8
11.	Magnesium (mg/l)	9.0	37.2
12.	Chloride (mg/l)	16	60
13.	Sulphate (mg/l)	39	10
14.	Phosphate as PO_4 (mg/l)	BDL	BDL
15.	Ammonical Nitrogen (mg/l) as N	BDL	BDL
16.	Sodium (mg/l)	20	56
17.	Potassium (mg/l)	3.1	5.1
18.	Sodium Absorption Ratio	0.75	1.46
19.	Nitrate as a NO_3 (mg/l)	4.64	10.2
20.	Flouride (mg/l)	0.26	0.35
21.	Colour (Pt-Co units)	BDL	BDL
22.	Total Coliform MPN/100ml	BDL	BDL
23.	Fecal Coliform MPN/100ml	BDL	BDL

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It is evident from the sample analysis results that presently there is no effect on the ground water by the operation of said Hadda Roddi activities.

Assessment of Environmental Compensation

- i. In OA No: 593/2017 the CPCB vide its report dated 12/12/2018 has submitted methodology for assessing environmental compensation and action plan to utilize the fund.

"3.1 In the instances as mentioned at a, b and c above, Pollution Index may be used as a basis to levy the Environmental Compensation. CPCB has published guidelines for categorization of industries into Red, Orange, Green and White based on concept of Pollution Index (PI). The Pollution Index is arrived after considering quantity & quality of emissions/ effluents generated types of hazardous wastes generated and consumption of resources. Pollution Index of an industrial sector is a numerical number in the range of 0 to 100 and can be represented as follows:

$$PI = f(\text{Water Pollution Score, Air Pollution Score \& HW Generation Score})$$

Pollution Index is a number from 0 to 100 and increasing value of PI denotes the increasing degree of pollution hazard from the industrial sector.

CPCB has issued directions to all SPCBs/PCCs on 07.03.2016 to adopt the methodology and follow guidelines prepared by CPCB for categorization of industrial sectors into Red, Orange, Green and White.

The concept of Pollution Index, which was deliberated widely with all stakeholders and agreed, shall be used for calculating Environmental Compensation. This may help in implementation of such provision throughout the country, a successful initiative in vital field of industrial pollution control.

After considering various factors including the policy implementation issues, Committee has come up with following formula for levying the Environmental Compensation in instances as mentioned at a, b and c including non-compliance of the environmental standards / violation of directions.

The Environmental Compensation shall be based on the following formula:

$$EC = P1 \times N \times R \times S \times LF$$

Where, EC is Environmental Compensation in \square
 PI = Pollution Index of industrial sector
 N = Number of days of violation took place

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R = A factor in Rupees (₹) for EC
 S = Factor for scale of operation
 LF = Location factor

The formula incorporates the anticipated severity of environmental pollution in terms of Pollution Index, duration of violation in terms of number of days, scale of operation in terms of micro & small/medium/large industry and location in terms of proximity to the large habitations.

Note:-

- a. The industrial sectors have been categorized into Red, Orange and Green, based on their Pollution Index in the range of 60 to 100, 41 to 59 and 21 to 40, respectively. It was suggested that the average pollution index of 80, 50 and 30 may be taken for calculating the Environmental Compensation for Red, Orange and Green categories of industries, respectively.
- b. N, number of days for which violation took place is the period between the day of violation observed/due date of direction's compliance and the day of compliance verified by PCB/SPCB/PCC.
- c. R is a factor in Rupees, which may be a minimum of 100 and maximum of 500. It is suggested to consider R as 250, as the Environmental Compensation in cases of violation.
- d. S could be based on small/medium/large industry categorization, which may be 0.5 for micro or small, 1.0 for medium and 1.5 for large units.
- e. LF, could be based on population of the city/town and location of the industrial unit. For the industrial unit located within municipal boundary or up to 10 km distance from the municipal boundary of the city/town, following factors (LF) may be used:

S. No.	Population* (million)	Location Factor# (LF)
1	Less than 1	1.0
2	1 to < 5	1.25
3	5 to < 10	1.5
4	10 and above	2.0

***Population of the city/town as per the latest Census of India**
#LF will be 1.0 in case unit is located >10km from municipal boundary

For critically polluted areas / Ecologically Sensitive areas, the scope of LF may be examined further.

f. In any case, minimum Environmental Compensation shall be R 5000/day."

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- ii. In view of the above, the committee had calculated as per formula stated above as $EC=PI \times N \times R \times S \times LF$. The Environmental Compensation of the said five Hadda Roddi units as presented below:

Sr. No.	Name of the Hadda Roddi operators*	PI	N	R	S	LF	EC (Rs)
1	Sh Ram Murti, s/o Sh Bhajan Ram, r/o Noor Mahal Road, Mohalla Ravidass Pura, Phillour, District Jalandhar.144410, Punjab.	80	1825	250	0.5	1.25	2,28,12,500
2	Sh Ramesh Kumar, s/o Late Sh. Tarsem Lal, s/o Sh Darshan Lal, Village Majara Khurd, PO Ladhowal, District Ludhiana - 141008, Punjab	80	1825	250	0.5	1.25	2,28,12,500
3	Sh Suraj Kumar, s/o Late Sh Kamal Kumar, r/o 6398, Mohalla Jagdishpura, Tajpur Road, Ludhiana - 141008, Punjab	80	1825	250	0.5	1.25	2,28,12,500
4	Sh Parshotam Lal, s/o Late Dalbir Chand, r/o B-33-752, Sarup Nagar, Salem Tabri, Ludhiana - 141008, Punjab	80	1825	250	0.5	1.25	2,28,12,500
5	Sh Munish Kumar, s/o Late Charanjit, r/o B-1-55/1, Shahi Mohalla, Ludhiana- 141008, Punjab	80	1825	250	0.5	1.25	2,28,12,500

* These operators have been identified by the applicants in O.A No. 465/2019 in matter of Kulwinder Singh Sandhu & ors. Vs Ram Murti & Ors. before National Green Tribunal, Principal Bench, New Delhi

PI = Pollution Index of industrial sector = 80 as the units are falling under Red Category

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N = Number of days of violation took place = 1825 (5 years x 365)

R = A factor in Rupees (₹) for EC = 250

S = Factor for scale of operation = 0.5 as the units are in Small Scale

LF = Location factor = 1.25 Population of Ludhiana city is 1618879 as per official census report for 2011 and the units are located within 5 Km from Ludhiana City.

Findings of the committee:

1. The committee has physically verified the facts at site as above.
2. The committee has observed that there is a problem of odour and nuisance in the area by the activities of the Hadda Roddi.
3. The sample analysis results revealed that the effluent being generated by the activities carried out by the Hadda Roddi have high concentrations of Biochemical Oxygen Demand, Chemical Oxygen Demand, Total Suspended Solids and Oil & Grease which may cause grave injury to the water receiving body.
4. The analysis results of river water revealed that the activities carried out by the Hadda Roddi are causing deterioration in the water quality of River Sutlej.
5. The analysis results of ground water revealed that presently there is no effect on the ground water quality of the area by the operation of said Hadda Roddi activities.
6. The committee has calculated the Environmental Compensation for five years, as per the guidelines framed in directions issued by the Hon'ble National Green Tribunal on 19.02.2019 in OA No. 593/2017.
7. For redressal of the grievances of the complainants there is a need to relocate the said Hadda Roddi and to setup a scientifically developed carcass plant. The Municipal Corporation Ludhiana has proposed a project to develop a scientific developed carcass plant at Noorpur Bet Ludhiana. The Punjab Pollution Control Board has already granted Consent to Establish (NOC) for this project.
8. The Municipal Corporation Ludhiana has informed that work for the installation of the said plant has been allotted to M/s Ess Bee Enterprises, Greater Noida, UP. LOI has been issued on 1.7.2019. The Municipal Corporation Ludhiana has informed vide letter no 264/500/D dated 02.08.2019 that the ground work has already been started and this plant will be fully operational within one year i.e. by August 2020 (**Annexure-E**)
9. The Municipal Corporation Ludhiana shall be asked to submit a time bound action plan for relocation of existing Hadda Roddi and completion & commissioning of the proposed scientifically developed carcass plant.

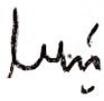
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10. For further comprehensive study of the environmental damage in the area caused by the operation of said Hadda Roddi, the project may be assigned to some institute of repute like National Environmental Engineering Research Institute (NEERI) or Indian Institute of Technology (IIT).

Date: 01.08.2019

Inspecting Officers:

Name	Designation	Signature
Amarinder Singh Malhi	SDM (West), on behalf of District Magistrate, Ludhiana	
J. P. Meena	Scientist "C" on behalf of Central Pollution Control Board, Regional Directorate, Lucknow	Jagdish 02/08/19
Paramjeet Singh	Environmental Engineer on behalf of Punjab Pollution Control Board, Regional Office III, Ludhiana	



Annexure - A

 <p align="center">Punjab Pollution Control Board Zonal Laboratory, E-648-B, 2nd Floor, Phase-5, Focal Point, Ludhiana. Water Analysis Report</p>		
1.	Laboratory Sample no.	E-171-172/Zonal Lab /2019
2.	Name of Industry :	M/s Hadda Rodi, Satluj Bridge, Ladhawal, Ludhiana.
3.	Name of Sample Collecting Officer :	Sh. JP Meena (Scientific C, CPCB), Er. Paramjit Singh, Environmental Engineer, Er. Amandeep Singh, Asstt. Environmental Engineer, Sh. Jagpal Singh (Kunngo), Sh. Janak Raj, Asstt. Scientific Officer, Sh. Ravinder Singh, (SRF, CPCB)
4.	Designation of Officer Authorizing Test:	Environmental Engineer, RO-III, Ludhiana
5.	Type of Sample :	Grab
6.	Date & Time of Sample Collection :	01.07.2019
7.	Date of Receiving/Commencement	02.07.2019
8.	Date of Completion	09.07.2019
9.	Point of Sample Collection	1. From stagnated water in drain leading to River sutlej 2. Waste water stored in the drum and ready for disposal
10.	Test Methods	As per relevant parts of IS:3025 & Methods of APHA

Results:

Sr. No.	Parameters	From stagnated water in drain leading to River sutlej	Waste water stored in the drum and ready for disposal
1.	pH	7.27	6.65
2.	Total Suspended Solids (mg/l)	514	692
3.	Total Dissolved Solids (mg/l)	1208	2026
4.	Chemical Oxygen Demand (mg/l)	3881	6019
5.	Bio-chemical Oxygen Demand (mg/l)	1650	2750
6.	Oil & Grease (mg/l)	102	174

Sample Analysed By

ਸੀ. ਐਚ. ਐਸ. ਕਨਕਰਾਜੀ. ਈ. ਓ. ਐਸ. ਵਾਤਾ ਵਿੱਜੀ III,
ਨਵੀ ਡਾਕ ਜੂ. ਵਾਤਾ ਵਿੱਜੀ
ਵਾਤਾ ਵਿੱਜੀ
ਡਾਇਰੀ ਨੰ. 18.6.4 ਸਿਤੀ. 15.7.19.

Environmental Engineer,
Incharge, Zonal Lab,
Ludhiana.

Ends. No. 9929

Dated 11/7/2019

A copy of the above is forwarded to the following for information and necessary action please along with data sheet.

1. The Chief Environmental Engineer, Punjab Pollution Control Board, Ludhiana.
2. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office-II, Ludhiana.
3. The Environmental Engineer, Punjab Pollution Control Board, Regional Office-III, Ludhiana.

Asstt. Scientific Officer,
Zonal lab, Ludhiana

¹[SCHEDULE - VI]
(See rule 3A)

GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENTAL
POLLUTANTS PART-A : EFFLUENTS

S. No.	Parameter	Standards			
		Inland surface water	Public Sewers	Land for irrigation	Marine coastal areas
1	2	3			
		(a)	(b)	(c)	(d)
1.	Colour and odour	See 6 of Annexure-I	--	See 6 of Annexure-I	See 6 of Annexure-I
2.	Suspended solids mg/l, Max.	100	600	200	(a) For process waste water-100 (b) For cooling water effluent 10 percent above total suspended matter of influent.
3.	Particulate size of suspended solids	Shall pass 850 micron IS Sieve	--	--	(a) Floatable solids, max. 3 mm. (b) Settleable solids, max. 850 microns.
² 4.	***	*	--	***	--
5.	pH Value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
6.	Temperature	shall not exceed 5°C above the receiving water temperature	--	--	shall not exceed 5°C above the receiving water temperature

¹ Schedule VI inserted by Rule 2(d) of the Environment (Protection) Second Amendment Rules, 1993 notified vide G.S.R. 422(E) dated 19.05.1993, published in the Gazette No. 174 dated 19.05.1993.

² Omitted by Rule 2(d)(i) of the Environment (Protection) Third Amendment Rules, 1993 vide Notification No.G.S.R.801(E), dated 31.12.1993.

S. No.	Parameter	Standards			
		Inland surface water	Public Sewers	Land for irrigation	Marine coastal areas
1	2	3			
		(a)	(b)	(c)	(d)
7.	Oil and grease mg/l Max.	10	20	10	20
8.	Total residual chlorin mg/l Max.	1.0	--	--	1.0
9.	Ammonical nitrogen (as N), mg/l Max.	50	50	--	50
10.	Total Kjeldahl Nitrogen (as NH ₃) mg/l, Max.	100	--	--	100
11.	Free ammonia (as NH ₃) mg/l, Max.	5.0	--	--	5.0
12.	Biochemical Oxygen demand ¹ [3 days at 27°C] mg/t max.	30	350	100	100
13.	Chemical Oxygen Demand, mg/l, max.	250	--	--	250
14.	Arsenic (as As), mg/l, max.	0.2	0.2	0.2	0.2
15.	Mercury (as Hg), mg/l, Max.	0.01	0.01	--	0.01
16.	Lead (as Pb) mg/l, Max.	0.1	1.0	--	2.0
17.	Cadmium (as Cd) mg/l, Max.	2.0	1.0	--	2.0
18.	Hexavalent Chromium (as Cr+6), mg/l max.	0.1	2.0	--	1.0

¹ Substituted by Rule 2 of the Environment (Protection) Amendment Rules, 1996 notified by G.S.R. 176, dated 2.4.1996 may be read as BOD (3 days at 27°C) wherever BOD 5 days 20°C occurred.

S. No.	Parameter	Standards			
		Inland surface water	Public Sewers	Land for irrigation	Marine coastal areas
1	2	3			
		(a)	(b)	(c)	(d)
19.	Total chromium (as Cr.) mg/l, Max.	2.0	2.0	--	2.0
20.	Copper (as Cu) mg/l, Max.	3.0	3.0	--	3.0
21.	Zinc (As Zn.) mg/l, Max.	5.0	15	--	15
22.	Selenium (as Se.) mg/l, Max.	0.05	0.05	--	0.05
23.	Nickel (as Ni) mg/l, Max.	3.0	3.0	--	5.0
¹ 24.	***	*	*	*	*
¹ 25.	***	*	*	*	*
¹ 26.	***	*	*	*	*
27.	Cyanide (as CN) mg/l Max.	0.2	2.0	0.2	0.2
¹ 28.	***	*	*	*	*
29.	Fluoride (as F) mg/l Max.	2.0	15	--	15
30.	Dissolved Phosphates (as P), mg/l Max.	5.0	--	--	--
² 31.	***	*	*	*	*
32.	Sulphide (as S) mg/l Max.	2.0	--	--	5.0
33.	Phenoile compounds (as C ₆ H ₅ OH) mg/l, Max.	1.0	5.0	--	5.0

¹ Omitted by Rule 2(d)(i) of the Environment (Protection) Third Amendment Rules, 1993 vide Notification No.G.S.R.801(E), dated 31.12.1993.

S. No.	Parameter	Standards			
		Inland surface water	Public Sewers	Land for irrigation	Marine coastal areas
1	2	3			
		(a)	(b)	(c)	(d)
34.	Radioactive materials :				
	(a) Alpha emitter micro curie/ml.	10 ⁻⁷	10 ⁻⁷	10 ⁻⁸	10 ⁻⁷
	(b) Beta emitter micro curie/ml.	10 ⁻⁶	10 ⁻⁶	10 ⁻⁷	10 ⁻⁶
35.	Bio-assay test	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent
36.	Manganese (as Mn)	2 mg/l	2 mg/l	--	2 mg/l
37.	Iron (as Fe)	3 mg/l	3 mg/l	--	3 mg/l
38.	Vanadium (as V)	0.2 mg/l	0.2 mg/l	--	0.2 mg/l
39.	Nitrate Nitrogen	10 mg/l	--	--	20 mg/l
¹ 40.	***	*	*	*	*

¹ Omitted by Rule 2(d)(i) of the Environment (Protection) Third Amendment Rules, 1993 vide Notification No. G.S.R. 801(E) dated 31.12.1993

Answer - C



Punjab Pollution Control Board

Zonal Laboratory, E-648-B, 2nd Floor,
Phase-5, Focal Point, Ludhiana.

Water Analysis Report

1.	Laboratory Sample no.	SW-784-85/Zonal Lab /2019
2.	Name of Industry :	M/s Hadda Rodi, Satluj Bridge, Ladhawal, Ludhiana.
3.	Name of Sample Collecting Officer :	Sh. JP Meena (Scientist C, CPCB), Er. Paramjit Singh, Environmental Engineer, Er. Amandeep Singh, Asstt. Environmental Engineer, Sh. Jagpal Singh (Kango), Sh. Janak Raj, Asstt. Scientific Officer, Sh. Ravinder Singh, SRF, CPCB)
4.	Designation of Officer Authorizing Test:	Environmental Engineer, RO-III, Ludhiana
5.	Type of Sample :	Grab
6.	Date & Time of Sample Collection :	01.07.2019 12.30 pm
7.	Date of Receiving/Commencement	01.07.2019
8.	Date of Completion	09.07.2019
9.	Point of Sample Collection	1. River sutlej at 100 mtrs u/s of Hadda Rodi 2. River sutlej at 100 mtrs d/s of Hadda Rodi
10.	Test Methods	As per relevant parts of IS:3025 & Methods of APHA

Results:

Sr. No.	Parameters	River sutlej at 100 mtrs u/s of Hadda Rodi	River sutlej at 100 mtrs d/s of Hadda Rodi
1.	pH	8.24	8.29
2.	Total Suspended Solids (mg/l)	13	17
3.	Dissolved Oxygen (mg/l)	7.7	7.6
4.	Total Dissolved Solids (mg/l)	178	183
5.	Chemical Oxygen Demand (mg/l)	6.4	6.8
6.	Bio-chemical Oxygen Demand (mg/l)	BDL	BDL
7.	Ammonical Nitrogen (mg/l) as NH ₃ -N	1.6	1.6
8.	T.Coli MPN/100 ml	680	780
9.	F.Coli MPN/100 ml	200	200
10.	Conductivity (µS/cm)	294	305
11.	Chloride (mg/l)	18	19
12.	Sulphate (mg/l)	13	15
13.	Sodium (mg/l)	9.9	12.0
14.	Potassium (mg/l)	2.3	2.9
15.	Total Alkalinity (mg/l)	130	134
16.	Total Hardness (mg/l)	104	110
17.	Calcium (mg/l)	24.8	26.4
18.	Magnesium (mg/l)	10.3	10.8
19.	Turbidity (NTU)	14	16
20.	Phosphate (mg/l)	0.96	1.0

Note: BDL- Below method Detection Limit.

Sample Analysed By *PKW*

PKW
Environmental Engineer,
Incharge, Zonal Lab,
Ludhiana.

Ends. No. 9921-23

Dated 11/7/2019

A copy of the above is forwarded to the following for information, and necessary action please along with data sheet.

1. The Chief Environmental Engineer, Punjab Pollution Control Board, Ludhiana.
2. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office-II, Ludhiana.
3. The Environmental Engineer, Punjab Pollution Control Board, Regional Office-III, Ludhiana.

PKW
Asstt. Scientific Officer,
Zonal Lab, Ludhiana.

GW Reports

POLLUTION CONTROL BOARD VATAVARAN BHAVAN,
NABHA ROAD, PATIALA
GROUND WATER REPORT



- | | |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| 1. Laboratory Sample No. | GW 159-160/ H.O.Lab./ G.W. Monitoring/2019 |
| 2. ULR Number | ULR-TC7045180000000113-IP |
| 3. Name of Industry | Ground Water Samples taken from
Hadda Rodi, Sutlej bridge, Ludhiana. |
| 4. Name of Sample collecting Officer | Sh. J.P. Meera Scientist C. CPCB,
Er. Paramjeet Singh Singh EE, Er. Amandeep Singh AEE,
& Sh. Jank Raj, ASO. |
| 5. Designation of authorizing Test | EE, RO-III, Ludhiana |
| 6. Date & Time of Sample collection | 01.07.2019 |
| 7. Date & Time of Sample receipt in Lab. | 02.07.2019 |
| 8. Period of Analysis | 02.07.2019 to 11.07.2019 |
| 9. Test Methods | As per relevant parts of IS:3025/IS:1622 &
Methods of APHA |

ਸ਼੍ਰੀ ਮਾਤਾ ਜੀ. ਕੌਰ ਸਿੰਘ
ਜੀ. ਡੀ. ਡੀ. ਕੌਰ ਸਿੰਘ
17/7/19
ਭਾਇਕੀ ਨੰ.
ਜੀ. ਡੀ. ਡੀ. ਕੌਰ ਸਿੰਘ

Results

Sr. no.	Parameters	From Hand pump within the premises of Hadda Rodi installed at 50 ft. depth	From Hand pump installed at Peer Baba premises, Sutlej Bridge Ludhiana, as reference sample
1	pH	7.44	7.18
2	Electrical Conductivity μ S/cm	289	650
3	Turbidity NTU	BDL	BDL
4	Total Suspended Solids mg/l	BDL	BDL
5	Total Dissolved Solids mg/l	182	397
6	*Chemical Oxygen Demand mg/l	BDL	BDL
7	*Bio-Chemical Oxygen Demand mg/l	BDL	BDL
8	Total Alkalinity mg/l	104	284
9	Total Hardness mg/l	134	280
10	Calcium mg/l	38.8	50.8
11	Magnesium mg/l	9.0	37.2
12	Chloride mg/l	16	60
13	Sulphate mg/l	39	10
14	*Phosphate as PO_4 mg/l	BDL	BDL
15	Ammonical Nitrogen as N mg/l	BDL	BDL
16	*Sodium mg/l	20	56
17	*Potassium mg/l	3.1	5.1
18	*Sodium Absorption Ratio	0.75	1.46
19	*Nitrate as NO_3 mg/l	4.64	10.2
20	*Flouride mg/l	0.26	0.35
21	*Colour (Pt-Co units)	BDL	BDL
22	*Total Coliform. MPN/100 ml	BDL	BDL
23	*Faecal Coliform MPN/100 ml	BDL	BDL

* not covered under scope of NABL 20

Note: BDL means Below Method Detection Limit.

--End of Report--

Analyzed by *Sonu Kumar*
12-779

Amandeep Singh
Scientific Officer

Endst. No: 80937-38

Dt. 12/7/2019

A copy of the above is forwarded to the:-

1. The Senior Environment Engineer, Punjab Pollution Control Board, Zonal Office-2, Ludhiana.
2. The Environment Engineer, Punjab Pollution Control Board, Regional Office-III, Ludhiana.

h. P. Singh
Asstt. Scientific Officer
12/7/19

Municipal Corporation Ludhiana
Health Branch (vet)

No 264/Sw/D

Date 2/8/19

1. MC Ludhiana is going to establish a modern carcass utilization plant for the disposal of dead animals.
2. After following the due procedures of tendering the LOI has been issued and the agreement done with a Noida based Company.
3. The groundwork has already been Started and this plant will be fully operational within one year i.e. by August 2020


2/8/19
Senior Veterinary Officer
Municipal Corporation Ludhiana