BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH: NEW DELHI

O.A .NO. 688/2018

IN THE MATTER OF:-

K. LAKSHMA REDDY **APPLICANT**

VERSUS

M/s SIDDHI VINAYAKA AGRO OIL MILL & ORS. **RESPONDENTS**

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(M. MADHUSUDANAN)
RD CHENNAI
CENTRAL POLLUTION CONTROL BOARD
PARIVESH BHAWAN, EAST ARJUN NAGAR,
DELHI- 110032

PLACE: - DELHI
DATED: - 30.10.2019

REPORT OF JOINT COMMITTEE IN THE MATTER OF OA NO.: 688/2018 BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL PRINCIPAL BENCH, NEW DELHI IN COMPLIANCE OF ORDER DT.: 8TH AUGUST, 2019

Submitted to

Hon'ble National Green Tribunal
Principal Bench, New Delhi

PREAMBLE

In the matter of Original Application No.688/2018, Shri. K. Lakshma Reddy Vs M/s. Siddhi Vinayaka Agro Extractions Pvt. Ltd., M/s. Frigerio Conserva Allana Ltd. & M/s. Piramal Enterprises Ltd, the National Green Tribunal (NGT), Principal Bench vide its order dated August 8, 2019 directed for a fresh inspection by a joint Committee comprising CPCB, IIT - Madras, Chennai, NEERI, Nagpur and State PCB to study:

- The present status of the pollution caused in terms of air, land and water
- Assess the compensation for the last five years which should be deterrent and adequate to recover the cost of restoration.
- Suggest measures for remediation of the contaminated sites in terms of ground water and soil
- Whether the units can be allowed to operate, having regard to the adequacy of the pollution control devices and compliance of environmental norms

In accordance with the said order, Central Pollution Control Board has constituted a joint committee based on the nominations received from the respective institutions as detailed below to study and submit its report on or before 31st October, 2019

S.No	Expert Member	Organization	capacity
1.	Dr. Madhusudanan M. Regional Director (Chennai)	Central Pollution Control Board, Regional Directorate, Chennai	Nodal Officer
2.	Prof. Shiva Nagendra SM, Professor	Department of Civil Engineering, IIT Madras Chennai - 600036	Member
3.	Dr. Shaik Basha, Scientist and Head	CSIR-NEERI, Zonal Center, IICT Campus, Tarnaka Hyderabad-500007.	Member
4.	Shri. B. Raghu Joint Chief Environmental Engineer-cum-Zonal Officer, TSPCB	Telangana State Pollution Control Board, Zonal Office, RC Puram Sanga Reddy District Telangana State	Member

5.	Shri. S. Karthikeyan Scientist C	Central Pollution Control Board, Regional Directorate, Bengaluru	Member Convenor

Copy of the Order is placed at Exhibit – 1 for ready reference.

First meeting of Joint Committee was convened at the Office of Zonal Officer, RC Puram, TSPCB on 16th September, 2019 at 10 AM. All the members of the Joint Committee and representatives from the NGO namely Vivekananda Institute of Knowledge and Service (VIKAS) participated on behalf of the Applicant. The minutes of the meeting is placed at Annexure – I. Briefing of the case was presented before the forum by Shri. B. V. Bhadra Girish, Environmental Engineer (EE), TSPCB and appraised in length and breadth of the issues. The representatives of the applicant have aired their issues to the forum and submitted a representation. The committee has given a patient hearing and sufficient time to the representatives of NGO-VIKAS.

In the afternoon, the committee along with the representatives of the applicant visited one of the industry namely M/s. Piramal Enterprises Limited and village Digwal on 16th September, 2019. The Committee visited M/s. Frigerio Conserva Allana Pvt. Ltd., and M/s. Shree Siddhi Vinayaka Agro Extractions Pvt. Ltd., on 17th September 2019 along with the representatives of the Applicant. Later, a concluding meeting was held in the evening of 17th September, 2019 and decided to carry out the review monitoring of all affected areas and collect groundwater, effluent, stack and ambient air samples. Analysis of samples to be carried out by any NABL/EPA recognized laboratory.

As per the decision of the Joint Committee, review monitoring was carried out during 25th to 30th September, 2019, 40 number of representative ground water samples were collected around the three industries and the analysis of ground water samples were suggested to be carried out at Environment Protection, Training and Research Institute (EPTRI), Hyderabad and other samples at Zonal Laboratory, TSPCB, R. C Puram.

The inspection report and present status of the industry and its compliance of Environmental norms, industry-wise are discussed below:

On receipt of Analytical Test Report from EPTRI, a finalization meeting was convened on 24th October, 2019 to discuss the report and finalize the matter. Accordingly, the report is submitted before the Hon'ble NGT, Principal Bench, New Delhi.

BACKGROUND

1. The Hon'ble National Green Tribunal (NGT), Principal Bench, New Delhi has registered an Application, OA No. 688 / 2018, Suo Motu and initiated proceedings on the receipt of a letter from Sri K. Lakshma Reddy alleging that untreated effluents are being discharged by M/s. Frigerio Conserva Allana Ltd., Algole Road, Zaheerabad, M/s. Piramal Enterprises Ltd., Village Digwal, Kohir Mandal and M/s. Sree Siddhi Vinayaka Agro Extractions Pvt. Ltd., Village Alipur, Zaheerabad, Sangareddy District, adversely effecting the water quality & availability of groundwater and drinking water to the inhabitants of the surrounding area.

The Hon'ble NGT has disposed the above case vide Order dated: 23.10.2018 directing as follows:-

1. Proceedings have been initiated in this matter on receipt of a letter alleging that untreated effluents are being discharged by Frigerio Conserva Allana Ltd, Algole Road, Zaheerabad, Piramal Enterprises Ltd. Digwal, Kohir Mandal, and Shree Siddhi Vinayaka Agro Extractions Pvt. Ltd., Zaheerabad, Sangareddy District, Telangana State, adversely affecting the water quality & availability of ground water and drinking water to the inhabitants of the surroundings area.
2. Accordingly, we direct the Telangana State Pollution Control Board and District Magistrate of Sangareddy to look into the allegation and take appropriate action in accordance with law within one month from today.
3. Copy of this order be sent to Telangana State Pollution Control Board and the District Magistrate, Sangareddy who will act as nodal officer.
4. Report of action taken be sent to this Tribunal by email at filing.ngt@gmail.com on or before 31.11.2018.
5. The report may be put up for consideration on 14.12.2018.
6. Needless to say that every order of National Green Tribunal is binding as a decree of Court and noncompliance is actionable by way of punitive action in terms of the National Green Tribunal Act, 2010.
7. The application is disposed of'.

In accordance with the order of the Hon'ble NGT, the TSPCB constituted Rolling Task Force Teams to inspect the above three industries and subsequently, the compliance status of the above three industries along with analysis reports of the samples collected by the TSPCB

officials were reviewed before the Taskforce Committee of the TSPCB, in the meeting held on 24.11.2018.

Since the industry was not meeting the standards of Ambient Air Quality (AAQ) & for the discharge of emission and using untreated effluent for cooling purpose, non compliance of directions issued by the TSPCB and based on the recommendations of the Task Force Committee, the TSPCB issued Stop Production Order to M/s Piramal Enterprises Ltd., Digwal, Kohir (M), Sangareddy and forfeited Bank Guarantee of Rs. 30.0 Lakhs submitted by them. The TSPCB issued directions to remaining two industries i.e. M/s. Frigerio Conserva Allana Ltd, Unit-I (Meat Division), Sy. No. 325, Algole (V), Zaheerabad (M), Sangareddy District and M/s. Shree Siddhi Vinayaka Agro Extractions Pvt. Ltd, Sy. No.74/2, Alipur (V), Zaheerabad (M), Sangareddy District apart from forfeiting the Bank Guarantee of Rs. 20.0 Lakhs and Rs.8.0 Lakhs from them respectively. TSPCB submitted the Action Taken Report to the Hon'ble NGT vide mail dated 30.11.2018.

The Hon'ble NGT has passed an order dated:14.12.2018, stating that since the units in question had been repeatedly found to have exceeding pollution norms,

I. Mere forfeiture of Bank Guarantee was not adequate and that there was a statutory duty on the PCB to close the units till they are meeting all the norms to the satisfaction of the TSPCB.
II. To prosecute the industries for their past failures of non-compliance from time to time and
III. To recover compensation to the damage caused to the Environment on the polluter pays principle having regard to the financial capacity of the unit as well as assessed damages to the Environment as per principles laid down inter alia in M.C. Mehta Vs. Union of India, (1987) 1 SCC 395 and Sterlite Industries Ltd. Vs. Union of India 2013 (4) SCC 575.

Accordingly, the TSPCB reviewed the status of compliance of the above three industries in Task Force Committee meeting held on 28.12.2018 and took the following decisions:

a. The TSPCB has not considered the request of M/s Piramal Enterprises Ltd., for not lining all the rain water collection pits as per the earlier directions of the TSPCB.
b. The TSPCB issued Stop Production orders to M/s. Frigerio Conserva Allana Ltd., for storing huge quantity of ETP sludge openly, causing odour nuisance.

c. The TSPCB issued further directions to M/s. Shree Siddhi Vinayaka Agro Extractions Pvt. Ltd., to shift the unit from the present location to industrial estate.

Subsequently, the TSPCB temporarily revocated the stop production order issued to M/s Piramal Enterprises Ltd., vide order dt. 11.01.2019, since the industry has lined all the rain water collection pits and thus complied with all other conditions stipulated by the TSPCB.

Further, the TSPCB granted temporary permission to re-start the production to M/s. Frigerio Conserva Allana Ltd., vide order dt. 09.02.2019, stipulating conditions, as the industry has disposed ETP sludge to farmers as manure and complied with other conditions stipulated by the TSPCB.

The TSPCB also issued closure order to M/s. Shree Siddhi Vinayaka Agro Extractions Pvt. Ltd., vide order dt. 14.03.2019, as the industry is not meeting the standards of AAQ & emissions from Boiler.

Further, as per the directions of the Hon'ble NGT, the Environmental Engineer, Regional Office – I, Sangareddy, TSPCB has filed prosecution cases in Hon'ble First Class Judicial Magistrate Court, Zaheerabad, Sangareddy District, Telangana vide CFR Nos. 212 – 214 of 2019, against the above three industries for their non compliance from time to time. The cases are further posted for hearing during last week of October, 2019.

As directed by the Hon'ble NGT vide order dated:14.12.2018, "*To recover compensation to the damage caused to the Environment on the polluter pays principle having regard to the financial capacity of the unit as well as assessed damages to the Environment*", as per the recommendations of the Task Force Committee, the TSPCB proposal and the nominations received from the concerned Departments / Institutes, Government of Telangana vide GO Rt.No.23 Dt.18.02.2019, constituted the Multi-Disciplinary Team with the following members:

Sl.No.	Name of the Member	Designation
1	Sri. Abdul Hameed	Revenue Divisional Officer, Zaheerabad, Sangareddy District
2	Sri. Narsimha Rao	District Agriculture Officer, Sangareddy District
3	Sri. Venkateshwarlu	Deputy Director, Ground Water Department, Sangareddy District

4	Dr. T. Shashidhar	Associate Professor, Department of Civil Engineering, Indian Institute of Technology, Hyderabad, (IITH), Kandi (V), Sangareddy District
5	Dr.M.Umadevi	Director (I/C), Water Technology Centre, Professor Jayashankar Telangana State Agricultural University, (PJTSAU), Rajendra Nagar, Hyderabad
6	Sri B. Raghu (Member Convener)	Joint Chief Environmental Engineer cum Zonal Officer, TSPCB, Zonal Office, RC Puram, Hyderabad.
7	Sri. S. Karthikeyan	Scientist C, Central Pollution Control Board, Regional Directorate, Bengaluru. Later added as a member in accordance with the Hon'ble NGT Order dt.15.03.2019

As per the GO, the Multi Disciplinary Team (MDT), shall conduct a detailed study in consultation with the local public & Applicant in OA No. 688 of 2018 before to assess the extent of ecological damage and damage caused to any identifiable persons in and around the above three industries and to suggest compensation / damages to be recovered from them under the "Polluters Pay Principle", within a period of three months in accordance with the order of the Hon'ble NGT, New Delhi, dated:14.12.2018, and submit to the Member Secretary Telangana State Pollution Control Board (TSPCB), Hyderabad.

Accordingly, the team carried out the public interaction meetings, with prior intimation to the public and the applicant, field visits, collected Ground water and Soil samples from the Surrounding areas of all three industries and submitted their report on 10.06.2019 to the Member Secretary Telangana State Pollution Control Board (TSPCB), Hyderabad.

After examining the MDT's report, the National Green Tribunal (NGT), Principal Bench vide its order dated August 8, 2019 (E1) directed for a fresh inspection by a Joint Committee comprising CPCB, IITM, Chennai, NEERI, Nagpur and State PCB.

FIRST JOINT COMMITTEE MEETING

In accordance with the NGT order dt.:8th August, 2019 Central Pollution Control Board has constituted a joint committee to carry out the inspection, study the case and submit its report. The joint committee had its first meeting on 16th September, 2019, at the Office of Zonal Officer, RC Puram, TSPCB and discussed the case history and met the representatives of the applicant. The minutes of the meeting is placed at Annexure – 1. The Joint Committee also

agreed to deal these industries separately, since they are far apart and scale of operation, nature etc are also different. After detailed deliberation, following course of actions were made:

Action taken Report:

The committee along with the representatives of the applicant inspected M/s. Piramal Enterprises Limited and village Digwal on 16th September, 2019, afternoon. The committee assessed the pollution potential with respect to Water, Air, Noise, Solid Waste, Hazardous waste, treatment facilities including air pollution control devices & Waste management practices and status of the compliance by the industry. The committee also visited the village Digwal and interacted with the local public, assessed the Environmental Status with respect to water, air, soil and vegetation.

The Committee inspected M/s. Frigerio Conserva Allana Pvt. Ltd., and M/s. Shree Siddhi Vinayaka Agro Extractions Pvt. Ltd., on 17th September 2019 along with the representatives of the Applicant. The committee assessed the pollution potential with respect to water, air, noise, solid waste, hazardous waste, treatment facilities including air pollution control devices & Waste management practices and status of the compliance by the industries. The committee also visited the surrounding villages and assessed the Environmental Status with respect to water, air, soil and vegetation.

Later, a concluding meeting was held in the evening of 17th September, 2019 and decided to carry out monitoring of groundwater, effluent, stack and ambient air quality at the industries' premises to assess the present status as per the directions of the Hon'ble NGT. As per the decision of the Joint Committee, monitoring was carried out during 25th to 30th September, 2019, 40 number of representative ground water samples were collected around the three industries and the analysis of ground water samples were suggested to be carried out at Environment Protection, Training and Research Institute (EPTRI), Hyderabad and other samples at Zonal Laboratory, TSPCB, R. C Puram (Annexure 2/1-23). The Effluent, ambient and stack monitoring has been done by Telangana State Pollution Control Board (Annexure 3 (1/12). The gist of analysis is placed along with each industries as part of the inspection report. The inspection report and present status of industry, industry-wise are placed below:

1. M/s. Siddhi Vinayaka Agro Extractions Pvt. Ltd.:

1	Date of Inspection:	17-09-2019
2	Name of the industry & Complete Postal Address:	M/s. Shree Siddhivinayaka Agro Extractions Pvt. Ltd., Survey No.: 74/2, Village Alipur, Zaheerabad Mandal, Sangareddy District
3	Name of Contact person with designation Phone & Fax No/Email:	Shri. Govind Pallod, Executive Director, 08451-282535 & Mob.: 9849399931 Email Id.: s_vinayakaagro@yahoo.co.in
4	Year of commissioning	Solvent Extraction Plant in 1990 Refinery Unit in 1994
5	Category of Industry	Orange
	Scale of operation	Small Scale
	Installed Capacity, TPD	Refined Oil (By Physical refining Process) – 50 Refined Oil (By Chemical refining Process) – 20 De oiled Cake – 50 Acid Oil - 10
	Products & By Product manufactured	Crude Oil – 50 TPD De oiled Cake – 50 TPD Solvent Extracted Soya Oil – 9000 TPA
	Status of consents & Authorization (validity)	TSPCB/ZO/RCP/SANG/28/CFO/20171497 dt. 16th September, 2017 and valid upto 30-09-2021
	Raw material used	Soya Seed & Hexane
	Process details	Soya seed bin – Destoning & mechanical screening – Cracking – Cooking – Flaking – Extrusion – Extraction using Hexane – Oil Miscella – Distillation – Condensation. De oiled cake after extraction – Desolvenizer-cum-Toaster – Dryer-cum-Cooler - Packing
	Source of water	Bore well

Water Consumption & Waste Water Generated:

S. No		Fresh Water Consumption, KLD	Water Recycled in Process, KLD	Wastewater Generated, KLD
01	Process	65	28	20
02	Cooling	8.5	--	4
03	Boiler	--	--	4
04	Domestic	5	--	3

Effluent Treatment Plants:

Operational Status (during inspection):	Operational
Installed Treatment Capacity, (m3/day):	33

ETUs & Sequence of Treatment Plant:	Boiler blow down & SEP bleed off waste water treated in ETP consists of Primary Settling tank, Chemical precipitation using Alum & Polyelectrolyte, sand filter and skimming.
Point of disposal:	Treated wastewater is used for gardening.

Effluent analysis report:

S. No	Parameter	Method No.*	Results		As per CFO Limiting Standards	Compliance status
			Inlet of ETP	Outlet of ETP		
1	pH	4500 - H^+- B	7.23	7.19	5.5 to 9.0	Complied with
2	Total Suspended Solids (TSS)	2540-D	30	18	200	Complied with
3	Total Dissolved Solids (TDS)	2540-C	1,458	526	2100	Complied with
4	Chemical Oxygen Demand (COD)	5220-B	198	69	-	Complied with
5	Biological Oxygen Demand (BOD)	5210-B	27	9	100	Complied with
6	Oil & Grease	5520-B,D	BDL	BDL	10	Complied with

Stack Details and Source Emission Status:

S. No	Stack Attached To	Stack Ht (m)	Stack Dia (m)	PM (mg/Nm^3)	As per CFO Standard (mg / Nm^3)	Control equipment
01	Boiler, 6 TPH	30 m	0.8	56	115	Multi cyclone Dust collector & Wet Scrubber
02	D G Set, 400 KVA	4 mts from roof	Not applicable			

Analytical test report of review monitoring

Matrix.: **Ground Water from Borewell, otherwise stated**

S No	Code no	Sampling Point	Direc tion	Distance meters	TDS	Cl	F	SO_4	NO_3	Ca	Mg	Na
	JCW 2501 S1	Res House owned by G. Mallaiah 17/3, Shivani Ngr Pastapur	E	100	536	150	1.5	83	8	20	4	113

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	JCW 2507 S7	Res House owned by Sri. Narasimhulu	E	800	785	162	0.75	28	40	64	63	81
	JCW 2505 S5	Agri field owned by Omprakash 97/2 Pastapur	E	1500	574	62	0.56	22	30	50	49	57
	JCW 2506 S6	Res House owned by Sri Ganapathi 67, Green well gated Community, Pastapur	E	2000	620	38	0.61	12	25	94	40	84
	JCW 2502 S2	Res House owned by Rajasekar S 1-6-108/71 Zaheerabad	N	20	1610	467	0.59	250	16	190	51	470
	JCW 2503 S3	Res House owned by Srinivas A 16/34 Zaheerabad	N	500	462	57	0.61	15	14	40	4.8	86
	JCW 2504 S4	Open well Agri field owned by Manik Reddy 61 Thammadapalli	N	1500	450	72	0.66	8	50	66	41	37
	JCW 2605 S16	Res House owned by M Srinivas 23 Zaheerabad	W	60	574	62	0.56	22	30	50	49	57
	JCW 2606 S17	Res House owned by Md. Yusuf Qureshi 1-3-120/1/A Zaheerabad	W	1700	620	38	0.61	12	25	94	40	84
	JCW 2607 S18	Res House owned by M Yadagiri Reddy 6-90 Zaheerabad	W	1000	785	162	0.75	28	40	64	63	81
	JCW 2508 S8	Methodist Central Church Zaheerabad	SW	50	734	65	0.52	34	27	55	50	107
	JCW 2509 S9	Res House owned by P Srinivas 237 Village Alipur Zaheerabad	S	600	610	115	0.49	21	42	80	49	80
	JCW	Agri field	S	2000	460	30	0.53	14	36	52	48	38

	2510 S10	owned by Sri Imamuddin 139/A Village Alipur Zaheerabad										
	JCW 2511	Agri field owned by Sri Md. Muzeeb 97 Village Hothi K Zaheerabad	SW	4500	610	32	0.61	9	26	32	31	17

S No	Code no	Sampling Point	Direction	Distance meters	Boron	Iron	Cd	Cu	$Cr6^{+}$	Total Cr	Pb	Ni
	JCW 2501	Res House owned by G. Mallaiah 17/3, Shivani Ngr Pastapur	E	100	0.08	0.1	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2507	Res House owned by Sri. Narasimhulu	E	800	0.08	0.21	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2505	Agri field owned by Omprakash 97/2 Pastapur	E	1500	0.05	0.33	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2506	Res House owned by Sri Ganapathi 67, Green well gated Community, Pastapur	E	2000	0.11	0.11	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2502	Res House owned by Rajasekar S 1-6-108/71 Zaheerabad	N	20	0.04	0.42	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2503	Res House owned by Srinivas A 16/34 Zaheerabad	N	500	0.07	0.88	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2504	Open well Agri field owned by Manik Reddy 61 Thammadapalli	N	1500	0.06	0.29	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2605	Res House owned by M Srinivas 23 Zaheerabad	W	60	0.07	0.33	BDL	BDL	BDL	BDL	BDL	BDL
	JCW	Res House	W	1700	0.13	0.22	BDL	BDL	BDL	BDL	BDL	BDL

	2606	owned by Md. Yusuf Qureshi 1-3-120/1/A Zaheerabad										
	JCW 2607	Res House owned by M Yadagiri Reddy 6-90 Zaheerabad	W	1000	0.04	0.2	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2508	Methodist Central Church Zaheerabad	SW	50	0.06	0.17	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2509	Res House owned by P Srinivas 237 Village Alipur Zaheerabad	S	600	0.11	0.77	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2510	Agri field owned by Sri Imamuddin 139/A Village Alipur Zaheerabad	S	2000	0.07	0.33	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2511	Agri field owned by Sri Md. Muzeeb 97 Village Hothi K Zaheerabad	SW	4500	0.04	0.11	BDL	BDL	BDL	BDL	BDL	BDL

Hazardous Waste Management Status:

S. No	HW Generated	Category	Authorised Quantity	Hw storage & Disposal facility
1.	ETP Sludge	35.3 of Schedule - I	20 kgs / day	TSDF., Dundigal
2.	Used Oil	5.1 of Schedule - I	120 lts per annum	Board's authorized Recycler / Reprocessor or TSDF., Dundigal
3.	Spent Carbon Waste	36.2 of Schedule - I	750 kgs/day	TSDF., Dundigal

Compliance under Air Act	Complied
Compliance under Water Act	Complied
Compliance under HWM Rules	Complied

Observations:

The Unit has restricted consent to manufacture Solvent Extraction Oil (Physical Process) & De oiled cake – 50 TPD each only. The refinery section was closed wef March, 2018 due to Odour nuisance. Due to Complaint of Odour nuisance, the unit has been directed by TSPCB to shift the unit within eighteen months. For which the unit has agreed, submitted PERT chart and got land allotment in IDA, Buchinelli and requested time till first December 2020 for shifting the unit. The TSPCB issued CFE to the unit at the new location vide order dt. 24.10.2019 to facilitate shifting of the unit.

The unit is manufacturing Solvent extracted Soya Oil from Soya Beans seed. From seed, 18% of Oil, 80% of de-oiled cake and wastages will be 2% are manufactured / generated. On the day of inspection, the production of oil was 4.5 Tons, de-oiled cake – 20 Tons and Waste was 0.5 Tons from Soya Seed 25 Tons.

Water requirement is met out through own borewell.

The waste water is generated from Boiler blow down and extractor bleed off. The wastewater is treated for primary settling, chemical precipitation and skimming. The treated wastewater is used for gardening. ETP Sludge is sent to TSDF for disposal.

Coal cum bagasse fired Boiler, 6 TPH has been provided with Multi cyclone dust collector and wet scrubber to control the emission. DG set, 400 KVA has been provided with stack of 4 m from the roof. As per the direction of the State Board, proper shed has been provided to stock the Coal and Bagasse.

Hazardous waste: ETP sludge & Spent Carbon earth generated during the process are transported to TSDF site for disposal. Used Oil is sold to Board's authorised recycler / reprocessor or TSDF site for disposal.

The Joint Committee has reviewed the monitoring results of industrial effluent, groundwater and stack samples collected during 25th to 27th of September, 2019 and found that all the environmental quality parameters are within the permissible limits.

Recommendations:

TSPCB may be directed to follow up the progress made in shifting the unit to the new location, Industrial area, Buchinelli as per the PERT chart as well as CFE vide order dt. 24.10.2019.

M/s. Piramal Enterprises Ltd.:

1.	Date of Inspection:	16-09-2019
2.	Name of the industry & Complete Postal Address:	M/s. Piramal Enterprises Ltd., Survey No.: 71, 77, 78, 79A to 80A, 81A & 82A, Village Digwal, Kohir Mandal, Sangareddy District – 502 321
3.	Name of Contact person with designation Phone & Fax No/Email:	Shri. Shravan Reddy, Site Head - Digwal, 9866002540 & Shravan.ReddyJ@piramal.com
4.	Year of commissioning	1985
5.	Area	88 acres / 346200 Sq mt.
6.	Category of Industry	Red category
7.	Scale of operation	Large scale
8.	Products & By Product manufactured	62 products
9.	Consented capacity, earlier	12.105 TPD & 4418.32 TPA
10.	Consented Capacity, TPA, Present	6050 kgs/day. Restricted to 35 products at a time (15 Regular & 20 Campaign products) 50% of consented capacity
11.	Status of consents & Authorization (validity)	Consent Order no.: TSPCB/RCP/SRD/CFO/HO/20181686 dt.: 28th July, 2018 and valid upto 31st January 2021 & Authorization no.: TSPCB/RCP/CFO&HWM/HO /2018 dt.: 28th July, 2018.
12.	Raw material used	
13.	Process details	Chemical reaction in reactors – layer separation, extraction, distillation, filtration, centrifugation, drying, crystallisation, milling, blending and packing
14.	Source of water and distance from the unit	Purchased through tankers from nearby areas: Sadhashivpet, Kohir & Zaheerabad Mandals – 1162 KLD as per Consent Order. Actual consumption presently – 420 KLD

Water Consumption:

S. No.	use	As per CFO Quantity, KLD	Actual consumption, KLD
1.	Process	271.9	49.72
2.	Lab, Reactor & Floor washes	59	21.52

3.	Boiler feed	354	139.98
4.	Cooling tower makeup	300	59.21
5.	Scrubbers	10	5.63
6.	Domestic	77	60
7.	Gardening	90	84
	Total	1161	420.06

Waste Water Generated:

S. No		Fresh Water Consumption, KLD	Water Recycled in Process, KLD	Wastewater Generated, KLD
01	Process	49.72	--	48.86
02	Cooling	59.21	192	31
03	Domestic	60	--	60

Effluent Treatment Plant:

Operational Status (during inspection):	Operational
Installed Treatment Capacity, (m3/day	468 KLD
ETUs & Sequence of Treatment Plant and Point of disposal:	High TDS is treated with Bar screen, Oil & Grease Trap, Stripper, 5 stages Multi Effect Evaporator (MEE), Agitated Thin Film Drier (ATFD). Salt to TSDF. Condensate to Activated Sludge process (ASP) Low Total Dissolved Solids (LTDS) : The LTDS effluent is treated with Bar screen, pH correction tank – ASP – Pressurised Sand Filter (PSF) – Activated Charcoal Filter (ACF) – RO. RO permeate is used in Cooling tower. RO reject goes to MEE.

Effluent analysis reports:

S. No.	Parameter	Method No.*	Results	
			HTDS Inlet	HTDS Outlet
1.	pH	4500 - H^+- B	6.08	6.23
2.	Total Suspended Solids (TSS)	2540-D	876	532
3.	Total Dissolved Solids (TDS)	2540-C	36,085	33,284

S. No.	Parameter	Method No.*	Results

			Stripper Condensate	MEE Condensate
1.	pH	4500 - H^+- B	8.32	7.63
2.	Total Suspended Solids (TSS)	2540-D	20	14
3.	Total Dissolved Solids (TDS)	2540-C	770	411
4.	Chemical Oxygen Demand (COD)	5220-B	1,09,384	2,857
5.	Oil & Grease	5520 - B,D	BDL	BDL

S. No.	Parameter	Method No.*	Results		
			LTDS – Primary treatment Outlet	LTDS – Secondary treatment Outlet	LTDS – Tertiary treatment Outlet
1.	pH	4500 - H^+- B	6.33	6.54	6.82
2.	Total Suspended Solids (TSS)	2540-D	42	27	20
3.	Total Dissolved Solids (TDS)	2540-C	1,314	1,146	923
4.	Chemical Oxygen Demand (COD)	5220-B	449	167	131
5.	Biological Oxygen Demand (BOD)	5210-B	47	24	20
6.	Oil & Grease	5520 - B,D	BDL	BDL	BDL

S. No.	Parameter	**Method No.***	**Results**
			RO–Permeate
1.	pH	4500 - H^+- B	7.02
2.	Total Suspended Solids (TSS)	2540-D	BDL
3.	Total Dissolved Solids (TDS)	2540-C	52
4.	Chemical Oxygen Demand (COD)	5220-B	BDL

5.	Biological Oxygen Demand (BOD)	5210-B	BDL
6.	Oil & Grease	5520 - B,D	BDL
7	Total Organic Content (TOC)	-	BDL
8	Ammonical Nitrogen as NH_3-N	4500- NH_3-N	BDL
9	Total Kjeldhal Nitrogen	4500-N_{org} B	BDL
10	Nitrate Nitrogen as NO3-N	4500-B-NO_3^-N	BDL
11	Phosphate	4500-P .C	BDL
12	Sulphates as SO_4^{-2}	4500-SO_4^{-2}	BDL
13	Chlorides as Cl^-	4500-Cl^- B	10
14	Fluoride as F^-	4500-F^-.C	0.15
15	Phenolic Compounds	5530. D	BDL
16	Residual free Chlorine	4500-Cl^-.B	BDL
17	Zinc as Zn	3111. B	BDL
18	Iron as Fe	3111. B	BDL
19	Copper as Cu	3111. B	BDL
20	Total Chromium	3111. D	BDL
21	Hexavalent Chromium as Cr^{6+}	3500. Cr. B	BDL
22	Cyanide as CN^-	4500-CN^-.F	BDL
23	Arsenic as As	3114 - C	BDL
24	Mercury as Hg	3112 - B	BDL

Capacity of Treatment facilities:

S.No	Treatment Facility	Installed Capacity, KLD
1.	HTDS primary treatment	212
2.	Stripper	212
3.	MME, 5 stages	300
4.	AFTD	30
5.	LTDS primary treatment	468
6.	Secondary treatment	468
7.	Circular Disc RO System	468
8.	Anoxic tank	147 KL
9.	Aeration tank capacity	1015 KL

Stack Details and Source Emission Status:

S. No	Stack Attached To	Stack Ht (m)	Stack Dia (m)	PM (mg/Nm^3) Stack monitoring done for 16 TPH coal fired boiler	As per CFO standard (mg/Nm^3)	Opacity meter provided	Control equipment
01	Coal fired Boiler, TPH 4, 6 & 16	40	1.1	47	115	Yes	Bag Filters
02	FO fired boiler, 6 TPH	30	--	--	115	--	Bag Filters
03	D G Set, KVA 1000*2, 750*1, 500*3 & 380*1	--	--	--	--	--	Acoustic enclosures
04	Process vent – I	--	--	--	--	--	Two stages Caustic scrubber
05	Process vent – II	--	--	--	--	--	Two stages Water scrubber
06	Process vent – III	--	--	--	--	--	Two stages Caustic scrubber

Ambient Air Quality analysis reports:

S. No.	Parameter	Parameters			
		Shift Type	RSPM $\mu g/m^3$	SO_2 $\mu g/m^3$	NO_2 $\mu g/m^3$
1	Ambient Air Quality Monitoring carried out at the periphery of the industry near Guest House (Upwind direction)	10:00 AM to 06:00 PM	59	5	24
2	Ambient Air Quality Monitoring carried out at the periphery of the industry near the Rainwater Collection Pit No. 5 (RWCP) (Downwind direction)	10:15 AM to 06:15 PM	71	6	26
National Ambient Air Quality Standards		-	**100**	**80**	**80**

Analytical test report of review monitoring:

Matrix.: Ground Water from Borewell

S No	Code no	Sampling Point	Direction	Distance	TDS	Cl	F	SO_4	NO_3	Ca	Mg	Na

				meters								
	JCW 3010	Agri Field owned by Sri Kothuru Yesaiah, 113/16, Digwal	E	500	314	42	0.615	8	18	28	28	24
	JCW 3011	Agri field owned by Sri Ledy Dileep, 155, Digwal	S	800	860	282	0.81	42	11	62	61	73
	JCW 3012	Agri field owned by Sri. Shyamamma 151/E2, Digwal	S	1000	786	225	0.79	47	38	98	38	77
	JCW 3013	Agri field owned by Sri.Khaja 164//2 E Digwal	S	1000	624	142	0.68	30	24	84	25	62
	JCW 3014	Agri field owned by Sri.D.Krupakar 167/AA	SW	1500	986	320	0.59	29	6	140	52	75
	JCW 3015	Agri field owned by Sri Gouse Digwal	E	250	442	40	0.54	18	25	50	22	50
	JCW 3005	Agri field owned by Patel function hall 1, Digwal	SW	500	482	175	0.61	6	11	40	34	63
	JCW 3007	Agri field owned by Sri. P. Narasimhulu 6, Chilkapally Jarasangam (M)	NE	2000	404	37	0.525	9	27	42	40	18
	JCW 3008	Agri field owned by Sri Golla Chandraiah	NE	4000	502	40	0.49	6	39	58	46	36
	JCW 3006	Agri field owned by Sri Zilani Digwal	W	10	605	230	0.645	16	3	44	43	42
	JCW 2701	Hand pump Mandal Parishad Upper Primary school, Chinthalghat	ENE	4000	842	175	0.63	16	39	92	78	76
	JCW 2702	Public Bore Near Anganwadi	ENE	4000	670	97	0.58	13	40	64	50	75

		school Chinthalghat										
	JCW 2703	Public Bore Near Church Chinthalghat	ENE	4000	542	60	0.65	18	47	44	45	71
	JCW 2704	Public Bore Survey no.: 110 Chinthalghat	E	4000	635	130	0.49	22	10	52	55	75
	JCW 2705	Public Bore Survey no.: 50 Venkatapur	ESE	3500	1020	430	0.62	28	9	116	108	71
	JCW 2706	Open well Near water tank Madri	WSW	2000	604	115	0.58	24	46	64	57	63
	JCW 2707	Adjacent to NH 65 Madri road	WSW	2000	622	147	0.72	33	11	52	48	62

S No	Code no	Sampling Point	Direction	Distance meters	Boron	Iron	Cd	Cu	$Cr6^+$	Total Cr	Pb	Ni
	JCW 3010	Agri Field owned by Sri Kothuru Yesaiah, 113/16, Digwal	E	500	0.07	0.25	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 3011	Agri field owned by Sri Ledy Dileep, 155, Digwal	S	800	0.07	1.6	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 3012	Agri field owned by Sri. Shyamamma 151/E2, Digwal	S	1000	0.06	0.36	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 3013	Agri field owned by Sri.Khaja 164//2 E Digwal	S	1000	0.13	1.26	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 3014	Agri field owned by Sri.D.Krupakar 167/AA	SW	1500	0.06	0.37	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 3005	Agri field owned by Patel function hall 1, Digwal	SW	500	0.05	0.17	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 3007	Agri field owned by Sri. P. Narasimhulu 6, Chilkapally Jarasangam	NE	2000	0.06	0.23	BDL	BDL	BDL	BDL	BDL	BDL

		(M)										
	JCW 3008	Agri field owned by Sri Golla Chandraiah 19A Chilkapally V Jarasangam	NE	4000	0.07	0.53	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 3006	Agri field owned by Sri Zilani Digwal	W	10	0.13	0.48	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2701	Hand pump Mandal Parishad Upper Primary school, Chinthalghat	ENE	4000	0.11	0.75	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2702	Public Bore Near Anganwadi school Chinthalghat	ENE	4000	0.08	0.52	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2703	Public Bore Near Church Chinthalghat	ENE	4000	0.09	0.19	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2704	Public Bore Survey no.: 110 Chinthalghat	E	4000	0.06	0.13	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2705	Public Bore Survey no.: 50 Venkatapur	ESE	3500	0.04	0.08	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2706	Open well Near water tank Madri	WSW	2000	0.11	0.3	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2707	Adjacent to NH 65 Madri road	WSW	2000	0.05	0.15	BDL	BDL	BDL	BDL	BDL	BDL

Hazardous Waste Management Status:

S.No	HW Generated	Category	Authorised Quantity TPD	Hw storage & Disposal facility
1.	ETP Waste/Sludge	35.3 of schedule - I	2.635	TSDF
2.	Forced evaporation salts	35.3 of schedule - I	19.733	TSDF
3.	Off specification and discarded product	28.4 & 28.5 of schedule – I		Co-processing / AFRF / Incineration

4.	Spent carbon & Hyflow	28.3 of schedule – I		
5.	Discarded waste material from dust collector, vacuum system and floor sweeping	33.2 & 35.1 of schedule – I		
6.	Distillation residue	20.3 & 36.1 of schedule – I		
7.	Spent mixed solvents	28.6 of schedule - I		Solvents recovered to the maximum extent possible and reused or sent for Co-processing / AFRF.
8.	Waste Oil	5.1 of schedule - I	2.75 KLD	To authorized Reprocessors / recyclers
9.	Spent HCl	28.1 of schedule - I	2.312 KLD	
10.	Spent Sodium Bromide & its salt		1.794 KLD 67 lpd	
11.	Aluminium Chloride solution		3.459 KLD	
12.	Spent Sulfuric acid (40%)		193 lpd	
13.	Containers & Liners	33.1 of schedule - I	5250 nos/month	Sold after complete detoxification.
14.	Raney Nickel	28.2 of schedule - I	4 kg/day	Returned to the supplier
15.	Catalyst	28.2 of schedule - I	11.5 kg/day	
16.	Oil / fuel filter and oil contaminated rags	5.2 / 33.2 of schedule - I	5 nos / Annum	Sent to authorized agencies
17.	Spent ion exchange resins	35.2 of schedule - I	5 kg/day	
18.	Used paint drums	33.1 of schedule - I	100 nos/Annum	
19.	Insulation Thermocol insulation puff	--	5 kg/day	
20.	Insulation glass wool	--	5 kg/day	
21.	PPFRP	--	5 kg/day	
22.	Asbestos sheets	15.2 of schedule - I	7 kg/day	Sent to TSDF
23.	Construction wastes		100 kg / day	Disposed as per CDW Rules, 2016

Compliance under Air Act	Complied
Compliance under Water Act	Complied
Compliance under HWM Rules	Complied
Compliance of EC conditions	Complied

Observations:

Combined Consent has been granted in favour of M/s. Piramal Enterprises Limited to manufacture 62 products upto 12.1053 TPD (15 products on regular basis and 20 products are on campaign basis thereby restricted the number of products at a time to 35 only). The same has been restricted to 50% of consented quantity. Whereas average actual production at present is 2.4 TPD.

Water is purchased through tankers from Sadhashivpet, Kohir and Zaheerabad mandals and the average consumption per day is 420 KLD at present.

Effluent generated in the plant is treated in two distinct streams i.e., High Total Dissolved Solids (HTDS), 212 KLD & Low Total Dissolved Solids (LTDS) stream 120 KLD. HTDS stream is treated through Bar screen, Oil & Grease skimmer, Equalisation-cum-neutralisation tank, Flash mixer, Primary clariflocculator, stripper, Distillation, Multi Effect Evaporator (MEE) & Automated Thin Film Drier (ATFD). Organic solvent stripped off from the stripper is separated in distillation process and sent to cement industries for co-processing. The distilled effluents is taken up in ETP for further treatment. Condensate from MEE & ATFD is taken up in ETP for further treatment and salts to TSDF for disposal. Sludge from primary clariflocculator goes to decanter.

Trade effluent from process, washings, cooling tower bleed off, boiler blow down, Softner DM plant, Condensate from MEE & ATFD and Domestic effluent from Septic tank constitute LTDS stream. LTDS stream is treated through Bar screen and then mixed with the condensate from MEE & ATFD, pH correction tank, Tube settler, Anoxic tank, Diffused Aeration tank, Secondary Clarifier, 2nd stage Diffused aeration tank, Secondary clarifier, Pressure sand filter, Activated Carbon Filter (ACF), Duplex filter and Reverse Osmosis process RO. RO permeate is used for Boiler and cooling tower make up. RO rejects is

further treated in MEE. Part of ETP sludge is recycled back to aeration tank to maintain MLSS and remaining to sludge thickening unit. Domestic effluent is treated in Septic tank and treated in ETP.

Two stage wet scrubbers have been provided to all three process vents. Emissions from Boiler is controlled through Multi dust collector and Bag filter and discharged through a stack of height 40 mts. Stack of adequate height from DG house have been provided to all D G Sets. Nitrogen blanketing is done to solvent storage tanks.

Online emission Analyzer has been installed for VOC in case of Process vent and PM analyzer in case of Boiler, 16 TPH and connected to TSPCB and CPCB portal. In order to monitor the Ambient Air Quality in the premises, a Real Time online Continuous Ambient Air Quality Monitoring station has been established and connected to the PCB's Server.

To suppress the Odour nuisance emanating from scrubber areas, sludge beds, decanter area, Aeration tanks, ATFD area, in and around the production blocks, PIIAN liquid is sprayed.

The solid waste generated from LTDS & HTDS streams are processed and disposed to TSDF and Organic residue to authorized Cement industries for co-processing.

During monsoon, Rain water collected through rain water collection pits, treated along with LTDS stream partly and partly transported to Patancheru Effluent Treatment Plant for safe disposal.

Green Belt has been developed in an area of 196100 Sq ft covering 56% of total area, 88 acres and 9762 trees are raised.

The industry has already initiated to install the Electrostatic precipitator (ESP) as control equipment for the boilers.

The Joint Committee has further verified the reports submitted by the industry for verification of compliance status. The third party audit on water Audit by Institute of Chemical Technology, Mumbai, Bhubanashswar, Research papers on trace elemental analysis of soil samples in and around the area and CSR activities undertaken for the welfare of villagers were also reviewed and found in order.

The Joint Committee has reviewed the monitoring results of industrial effluent, ground water and stack samples collected during 27th to 30th of September, 2019 and found that all the environmental quality parameters are within the permissible limits

Recommendations:

The industry presently has 11 Nos. Rain water collection pits, lined with HDPE. The industry shall review the drainage pattern existing and only retain the necessary pits and remaining shall be closed down. An action plan for proper monitoring and treatment system for the rainwater may be submitted to TSPCB, so that the treated rainwater can be effectively used for the industrial purpose.

The industry shall monitor the groundwater quality including signature compounds and transport of contaminants as per raw materials / products / by-products, in and around the industry based on the drainage pattern on quarterly basis.

A periodic monitoring of environmental parameters in air, water and soil may be planned with reputed Government Organisations.

M/s. Frigerio Conserva Allana Private Ltd.:

1	Date of Inspection:	17-09-2019
2	Name of the industry & Complete Postal Address:	M/s. Frigerio Conserva Allana Private Ltd., Survey No.: 325, Village Algole, Zaheerabad Mandal, Sangareddy District – 502 220
3	Name of Contact person with designation Phone & Fax No/Email:	Shri. Javed Alam Khan, General Manager (Operations)
4	Year of commissioning	2002
5	Area, acres	Total - 185, Plant – 35, Green coverage – 105 & Vetriver cultivation – 25.
6	Number of employees	1000
7	Category of Industry	Red Category. Large scale Meat Processing Unit
8	Products & By Product manufactured, (TPD)	Frozen Meat – 400 Bone powder, Meat bone meal, Mutton tallow, blood tallow and Gel bone chip - 248
9	Installed Capacity	400 TPD
10	Status of consents & Authorization (validity)	Order no.: TSPCB/ZO/RCP/SRD/30/W&A/2017/215 dt 2nd March, 2017 and is valid upto 28th February, 2022.
11	Raw material used	Big animals (Buffalos)
12	Process details with Material Balance (with schematic diagram):	Inspection – Halal cutting – washing – Separation of red & Green Offals – separation, Cutting & Cleaning – De-boning – Meat preparation & Cuts segregation – Meat inspection – Plate / Blast Freezing - Packing
13	Source of water and distance from the unit	Bore well (Two are active out of Twelve numbers) – 1473 KLD Actual consumption ~ 960 KLD

Water Consumption & Waste Water Generated:

S. No		Fresh Water Consumption, KLD	Water Recycled in Process, KLD	Wastewater Generated, KLD
01	Process Washing	1110	40-50 % treated effluent are reused. 510 KLD	1085
02	Rendering Plant	20		20
03	Hides soaking	35		30 (High TDS)
04	Cooling + Boiler	228		20
05	Domestic	80		70
	Total	1473		1225

Effluent Treatment Plants:

Operational Status (during inspection):	**Operational**
Installed Treatment Capacity, KLD	1950
ETP & Sequence of Treatment Plant:	ETP consists of Oil & Grease trap, Vibratory Screen, SEPCOM, Anaerobic digestor (UASBR) two stage activated sludge process, polishing clarifier, Multi grade sand filter and Activated Charcoal filter (With standby filters). ETP sludge is treated in Decanter, Volute press and Stream drier. The treated sludge is used as manure. High TDS effluent is treated in Multiple Effect Evaporator (MEE) and the recovered salt is reused. For rendering plant, wet scrubber and Bio-filtration of 1.5 mt thickness have been provided. Animal ingesta is dried and used as a fuel along with Husk in Boiler.
Point of disposal:	Treated effluent is reused in the process, washing, gardening and Vetriver cultivation

Effluent analysis reports:

S. No	Parameter	Method No.*	Results			
			Raw Effluent	After Sepcom	After Biolo-gical Processes	Activated Carbon filter Outlet
1	pH	4500 - H^+- B	6.77	6.4	7.1	6.75
2	Total Suspended Solids (TSS)	2540-D	155	32	27	BDL
3	Total Dissolved Solids (TDS)	2540-C	2,775	2,499	1,102	980
4	Chemical Oxygen Demand (COD)	5220-B	335	302	82	41
5	Biological Oxygen Demand (BOD	5210-B	109	91	17	8
6	Oil & Grease	5520-B,D	0.4	0.4	BDL	BDL

S. No	Parameter	Method No.*	Results
			MEE Condensate
1	pH	4500 - H^+- B	8.05
2	Total Suspended Solids (TSS)	2540-D	BDL
3	Total Dissolved Solids (TDS)	2540-C	2,847

4	Chemical Oxygen Demand (COD)	5220-B	249
5	Biological Oxygen Demand (BOD)	5210-B	26

S. No.	Parameter	Units	Aeration Tank
1.	Dissolved Oxygen (DO)	mg/L	4.5

Analytical test report of review monitoring:

Matrix.: Ground Water from Borewell

S No	Code no	Sampling Point	Direction	Distance, meter	TDS	Cl	F	SO_4	NO_3	Ca	Mg	Na
	JCW 2602	Open well Agri Field owned by Sri Jaipal Reddy Thammadapalli	SE	400	632	177	0.78	88	22	80	36	33
	JCW 2603	Open well Agri field owned by Narasimha Reddy 40 Thammadapalli	SE	900	262	42	0.63	10	42	46	14	13
	JCW 2604	Open well Agri field owned by Mahipal Reddy 41 Thammadapalli	SE	1200	586	132	0.66	19	47	128	5	36
	JCW 3003	Grampanchayat BW Algole Near Hanuman temple	NE	2500	814	262	0.7	44	27	60	58	71
	JCW 3004	Agri field owned by Smt. Ewaramma 40, Algole Zaheerabad	NE	3000	730	215	0.75	12	9	58	56	70
	JCW 3001	Agri field owned by Yadava Reddy 341 & 342 Zaheerabad	SW	600	202	30	0.53	8	4	28	12	1.5
	JCW 3002	Agri field owned by Prathap Reddy 341/2 Zaheerabad	SW	1000	340	35	0.56	6	22	36	33	19
	JCW	Agri field	S	200	1405	310	0.71	160	34	110	58	89

	2601	owned by Sheelam Narsimha Reddy 103 Zaheerabad										

S No	Code no	Sampling Point	Direction	Distance, meters	Boron	Iron	Cd	Cu	$Cr6^{+}$	Total Cr	Pb	Ni
	JCW 2602	Open well Agri Field owned by Sri Jaipal Reddy Thammadapalli	SE	400	0.17	0.3	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2603	Open well Agri field owned by Narasimha Reddy 40 Thammadapalli	SE	900	0.09	0.26	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2604	Open well Agri field owned by Mahipal Reddy 41 Thammadapalli	SE	1200	0.1	0.4	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 3003	Grampanchayat BW Algole Near Hanuman temple	NE	2500	0.11	0.74	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 3004	Agri field owned by Smt. Ewaramma 40, Algole Zaheerabad	NE	3000	0.07	0.17	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 3001	Agri field owned by Yadava Reddy 341 & 342 Zaheerabad	SW	600	0.07	0.25	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 3002	Agri field owned by Prathap Reddy 341/2 Zaheerabad	SW	1000	0.09	0.24	BDL	BDL	BDL	BDL	BDL	BDL
	JCW 2601	Agri field owned by Sheelam Narsimha Reddy 103 Zaheerabad	S	200	0.13	0.21	BDL	BDL	BDL	BDL	BDL	BDL

Fuel details:

Type of Fuel	Consumption per Annum, TPA
Coal	230
Rice husk	4500
Ingesta	2500
Mango Kernal	220
Sludge	30

Stack Details and Source Emission Status:

S.No	Stack Attached To	Stack Ht (m)	Stack Dia (m)	PM (mg/Nm^3)	As per CFO standard (mg/Nm^3)	Control equipment
01	Boiler, 6 TPH	30	1.2	50	115	MDC & Bag Filter
02	D.G.Set, 750 KVA * 4 + 82.5 KVA * 1	5.5 + 2.5 mts from roof of the building have been provided for all DG set, 750 & 82.5 KVA respectively.				
03	Rendering Plant	--	--	--	--	Wet scrubber and bio filters

Hazardous Waste Management Status:

S.No	HW Generated	Category	Authorised Quantity	Quantity Generated	Hw storage & Disposal facility
1.	Used Oil	5.1 of Schedule - I	2010 Lts per annum	2 KL per annum	Board's authorized recycler / reprocessor or TSDF

Solid Waste Management Status:

S.No	SW Generated	Authorised Quantity, TPD	SW storage & Disposal facility
1.	Horns/Hooves/Hides	140	Sold to toy and artificial jewellery manufacturer
2.	Dung from Buffalo yard	1.0	Used as a seed in ETP and is sold to farmers as manure
3.	ETP Sludge	1.0	Used as manure
4.	Ingesta	32	Dried and used as fuel in Boiler
5.	Boiler ash	0.75	Sold to brick manufacturer

Compliance under Air Act	Complied
Compliance under Water Act	Complied.
Compliance under HWM Rules	Complied

Observations:

M/s. Frigerio Conserva Allana Ltd., started its meat division in 2002 with the installed capacity 80 TPD. Subsequently, the capacity was increased to 160 TPD, 240 and 400 TPD in the year 2005, 2013 & 2016 respectively. It is fully automated meat processing unit having facilities raw meat procurement & reception, quarantine facilities, mechanised abattoirs, product chilling rooms, air conditioning deboning salons, meat packing sections, plate freezing and blast freezing facilities, in line rendering plant, automatic packing units and cold storage warehousing. The officials including Veterinary doctors of Animal Husbandry Department in outpost at the unit inspect the buffalos, supervise, regular meat inspection, conduct tests in the laboratory and issue fitness certificate for export.

Combined Consent under Water & Air (Prevention and Control of Pollution) Acts and Hazardous & Other Wastes (Management & Transboundary Movement) Rules 2016 has been granted to manufacture Frozen Meat – 400 TPD and By products viz.: Bone Powder, Meat Bone meal, Mutton tallow, Blood tallow & Gel Bone chip – 248 TPD.

The unit is meeting its water requirement through two Bore wells out of twelve drilled within the premises to the tune of 960 KLD. Water is used for Process, Boiler feed, Cooling tower make up, plant washings and Domestic use.

The trade effluent generated from the plant, 1225 KLD, is treated in the Effluent Treatment Plant (ETP), designed capacity 1950 KLD, consists of Oil & grease trap, Equalization tank, Vibro screen, Solid separator, bar screen, flash mixer, Up-flow Anaerobic Sludge Blanket Reactor (UASBR) digestor, Primary Clarifier, First Activated Sludge Process (ASP) in two stages, secondary Clarifier, second Activated Sludge Process (ASP) in two stages, Tertiary Clarifier, Polishing Clarifier, Hodling tank, Multi Grade Filter (MGF) (with Standby) and Activated Charcoal Filter (ACF) (with Standby). Out of 1225 KLD effluent generation, 510 and 963 KLD of treated effluent is reused in the plant and used for Horticulture, Gardening, Lairrage and Road washings within the premises. Out of 185 acres, 170 acres of land is used for horticulture, agriculture, Vetiver cultivation and for green belt within the campus.

High Total Dissolved Solids (HTDS) effluent from hides section is treated in Multi Effect Evaporator (MEE), capacity 25KLD and Automated Thin Flim Drier (ATFD). MEE condensate is used for Boiler feed. The salt recovered is reused for hide process. ETP sludge is dried through Decanter, Volute Press and stream drier and used as manure.

The emission from Boiler is controlled through Multi Dust Collector and Bag filter and discharged through a stack of 30m height. In case of D G Set, stack of 6.5 m from D G house has been provided. Industrial ventilation has been provided to rendering plant and channelized through wet scrubber and Bio filter to control the Odour nuisance.

Solid Waste Horns, Hooves and Hides are sold to toy and artificial jewel manufacturer. The dung of buffalo is partly used as a seed in ETP and sold to farmers as manure. ETP Sludge is dried through decanter, volute press and stream drier and sold as manure. Ingesta is dried through a drier and used in boiler as fuel. Boiler Ash is sold to brick manufacturers.

Used oil and Grease is mixed with coal and used as a fuel in Boiler. House keeping of the unit was satisfactory. Green belt was raised satisfactorily.

The Joint Committee reviewed the second study report on status of ground water quality by Centre for Environment, Jawaharlal Nehru Technological University, Hyderabad. Soil Analysis report and soil health card analysis report from Prof. Jayashankar Telangana State Agricultural University, Hyderabad and CSR activities undertaken by the Industry were found to be in order. (Annexure 4).

The Joint Committee has also reviewed the monitoring results of industrial effluent, groundwater and stack samples collected during 26th to 30th of September, 2019 and found that all the environmental quality parameters are within the permissible limits.

Recommendations:

The industry may engage a reputed agency to study the optimum use of treated wastewater management system for the land irrigation.

The industry shall monitor on quarterly basis, the groundwater quality based on the drainage pattern in and around the industry and also odour dispersion as per meteorological conditions.

The industry shall install the online effluent monitoring system and connecting the same to the servers of TSPCB and CPCB.

ENVIRONMENTAL COMPENSATION (EC) CALCULATION

The environmental compensation for all the three industries namely, M/s. Shree Siddhi Vinayaka Agro Extractions Pvt. Ltd., M/s. Piramal Enterprises Ltd. and M/s. Frigerio Conserva Allana Ltd., is estimated based on the pollution index method developed by Central Pollution Control Board in the guidelines "Policy for levying Environmental Compensation (EC) for Industries" Vide Order no.: B-400(S) /IPC-III/2019-20/1162 dt.: 4th September, 2019 and action plan to utilize the fund"..

The Hon'ble National Green Tribunal has accepted the method and mentioned in the order dt 19.02.2019 in the matter of Original Application No. 593/2017, (W.P.)(Civil) No. 375/2012), Paryavaran Suraksha Samiti & Anr. Versus Union of India & Ors.

The following equation is used for estimating environmental compensation for all the three insutries:

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

Where,

EC = Environmental Compensation in ₹
PI = Pollution Index of industrial sector
N = Number of days of violation took place
R = A factor in Rupees (₹) for EC
S = Factor for scale of operation
LF = Location factor

i. **Pollution Index of industrial sector (PI):**

The Telangana State Pollution Control Board has categorized this industry into Orange category of industries and accordingly the Combined consent & Authorisation have been granted. For Orange category of industries, average pollution index is 50. Thus, PI is considered as 50 in the EC estimation for this industry.

ii. **Number of days of violation (N):**

The number of days for which violation took place is considered as the period between the day of violation observed and day of compliance verified by the TSPCB for the period from January 2014 to September 2019. On date, TSPCB issued directions under section 33(A) of Water Act and 31(A) of the Air Act to the industry that was violating consent conditions. Thus, for EC calculation, September, 2019 is considered as cut off month, since the last monitoring data available for the industry.

The details of the violations and dates considered for calculation of period of violation for estimating EC for M/s. Shree Siddhi Vinayaka Agro Extractions Pvt. Ltd. is given in Table 1:

Table 1: Details of the violations and days

S. No.	Date of violation observed	Action taken for violation including Bank Guarantee	Date of compliance observed	Number of days of violation	Remarks, if any. Summarise the violations
1	19.04.16	Stop production order issued dt. 28.05.2016	10.06.2016 (as per inspection)	54 days	Storage of huge quantities of untreated effluents with crude oil layer in below ground level tanks. Aeration process not in operation. Improper operation of APCE. Not provided closed sheds for storage of bagasse and boiler ash. Samples of groundwater, effluent, AAQM and Stack Monitoring were analysed to exceed the prescribed standards.
2	20.10.17	Directions issued vide order dt. 13.12.2017	01.03.2018 (the industry permanentl y stopped chemical refinery operations)	131 days	Characteristic odour of oil was observed in the premises and there is possibility of odour spreading in the surrounding area during wind. ETP of oil refining unit was in operation and characteristic smell was observed near the ETP
3	15.11.18	Directions issued vide order dt. 29.11.2018 and Bank Guarantee of Rs. 8.0 Lakhs forfeited.	06.02.2019 (as per inspection)	82 days	ETP was not in operation, not provided shed for storage of ash, 1 Ton of old spent carbon earth is stored within the RCC tank, not provided separate energy meter, not provided flow meters to measure the waste

					water generated, treated & disposed. The boiler blow down and cooling tower bleed off is stored in the settling tank and directly using on land for gardening the analysis results of the sample collected shows that the values are exceeding the on land for irrigation standards w.r.t TDS. The industry is using wood as fuel in the boiler and stored huge quantity of wood within the premises in and around the boiler
4	28.02.19	Closure order issued vide order dt. 14.03.2019	16.03.2019 (Verified that industry is closed their operation on 16.03.19)	17 days	

Note: The industry was further inspected jointly by the CPCB and TSPCB, Multi Disciplinary Team and Joint Committee and observed to be complying.

iii. Scale of operation (S):

The industry in village Alipur is considered as small scale as per consent issued by TSPCB as the capital investment by the industry is less than Rupees Five Crores. Thus, scale of operation (S) for EC estimation is considered as 0.5.

iv. Location factor (LF):

The industry is in village Alipur and adjacent to Zaheerabad and no other eco sensitive regions are located in the region. The total population in the region is less than one million. Thus location factor (LF) is considered as 1 for EC estimation.

v. Factor in Rupees (R) (Rs):

As per the environmental compensation estimation guidelines, factor of rupees may be minimum of Rs 100/- and maximum of Rs 500/-. In the guidelines it is suggested to consider R as Rs 250/-, as environmental compensation in case of

violation. The factor of rupees is considered as Rs.125/- for estimating environmental compensation for this industry, considering the pollution potential.

RECOMENDATIONS:

1. Considering the above factors, estimation of EC is given in Table 2

Table 2: Factors considered and EC calculations for M/s. Siddhi Vinayaka Agro Extractions Pvt. Ltd., Village Alipur, Zaheerabad Mandal, Sangareddy District

Sl	Period of non-compliance	PI	S	LF	R (Rs)	N (days)	Environmental compensation (Rs)
1	19.04.2016 to 10.06.2016	50	0.5	1	125/-	54	**168750/-**
2	20.10.2017 to 01.03.2018	50	0.5	1	125/-	131	**409375/-**
3	15.11.2018 to 06.02.2019	50	0.5	1	125/-	82	**256250/-**
4	28.02.2019 to 16.03.2019	50	0.5	1	125/-	17	**53125/-**
	Total					**284**	**887500/-**

The minimum environmental compensation as per guidelines is Rs. 5000 per day. The Joint Committee also reviewed the deterrent factor for calculation. It is made into a conclusion that since the industry has agreed to shift to the new location and also the scale of violation is insignificant as per the analysis reports of groundwater, it is recommended to calculate Rs. 5000 per day rather than following the amount as per above table and recalculated the compensation, amounting to a total of Rs. 14,20,000/- for 284 days @5000/day. Also, the Joint Committee observed that during this period, TSPCB has forfeited an amount of Rs. 8,00,000/- from the Bank Guarantee Submitted.

The details of violations and dates considered for calculation of period of violation for estimating EC for M/s. Piramal Enterprises Ltd., as Table 3:

S.No.	Date of violation observed	Action taken for violation including Bank Guarantee	Date of compliance observed	No. of days of violation	Remarks, if any Summarise the violations
1	25.03.2015	Directions issued vide order dt. 03.07.2015. Directions issued vide order dt. 04.02.2017 and Bank Guarantee of Rs. 46.0 Lakhs forfeited. Directions issued vide order dt. 06.09.2017 and Bank Guarantee of Rs. 23.0 Lakhs forfeited. Directions issued vide order dt. 04.07.2018. Stop production order issued dt. 29.11.2018 and Bank Guarantee of Rs.30.0 lakhs forfeited.	08.01.2019 (as per inspection and verification) The industry was further inspected jointly by the CPCB and TSPCB, Multi Disciplinary Team and Joint Committee and observed to be complying.	1386	Lot of effluent spillages were observed within the industry premises mainly at effluent handling area and other un-floored areas thereby causing surface and ground water pollution in the surrounding area and also causing runoff carrying to the low lying area. Sludge pump provided was under breakdown and lot of effluents with sludge were spilled in the MEE area. Seepages observed near solvent distillation area and at outside the compound wall near Boiler areas. The industry is not taking adequate measures to control air & water pollution inspite of several directions from the Board. From the analysis reports of the samples collected by the Board Officials on 29.08.2016,

					15.09.2016 & 29.12.2016 it was noted that, the RWH pits water observed contaminated and also noted presence of some compounds in all the samples collected from the RWH Pits, Ground Water & industrial effluent. The industry has not complied with most of the directions Viz. Usage of effluent / wastewater for cooling tower, Lining of rainwater pits, upgradation of scrubbers, installation of online pH meters, maintaining freeboard for the effluent collection tanks, non-submission of BG as sought, etc. From the analysis of the groundwater collected from the Bore wells, contaminations was observed in rain water harvesting pits due to improper handling of effluents and from the operations of the industry. Contaminated water stagnations were observed in the plant premises and the ATFD was not functioning effectively.

					The industry has not provided multi stage scrubbers to all production blocks, not provided online pH meters for the Multi-stage scrubbers , not provided vent condensers to all bulk storage tanks, the effluent collection tank is stored upto the brim level, indicating non operation of ETP, not install online continuous monitoring system for TOC. Traces of Toluene and Acetic acid dichloro were detected in the sample of groundwater collected from the borewell within the agricultural lands of Sri Md. Jalal, S/o Md. Maisu. The industry is not meeting The standards of AAQ & stack Monitoring and from the analysis results of water samples collected during the inspection from the industry, it was noted that, the Rain water collection pits were holding high COD & TDS contents, which indicate contaminated with effluent. Presence of COD-1705 & TDS-2684 mg/Lts respectively in RO Permeate indicates poor

					performance of the ZLD and presence of COD-10695 & TDS-18306 mg/Lts respectively, indicate using of effluent for cooling purpose violating the directions issued by the Board.

Considering the above factors, estimation of EC is given in Table 4

Table 4: Factors considered and EC calculations for M/s. Piramal Enterprises. Ltd.,

S.No	Period of non compliance	PI	S	LF	R (Rs)	N (days)	Environmental compensation (Rs)
1	25.03.2015 to 08.01.2019	80	1.5	1	250/-	1386	**4,15,80,000/-**
	Total					**1386**	**4,15,80,000/-**
	25.03.2015 to 08.01.2019	Rs. 60000/- per day				1386	**8.31,60,000/- *****

***The Joint Committee deliberated the violations of the industry and also discussed the scale of violations as per TSPCB records. It is observed that TSPCB has never issued any closure notice to the industry till 29.11.2018. It is also reported that the major violations were non-compliance of lining of rainwater collection pits. Considering all the factors above, the Joint Committee recommended to put maximum environmental compensation per day as per the guidelines of CPCB i.e., Rs. 60,000/- per day, amounting to Rs. 8.31,60,000/- for 1386 days.

The Multi Disciplinary Team and Joint Committee has collected the environmental samples in and around the industry and found to be within the permissible limits. During the period, TSPCB has forfeited an amount of Rs. 99,00,000/- from the Bank Guarantee Submitted by the industry, for the violations by the industry.

The chronology of the events and dates considered for calculation of period of violation for estimating EC for M/s. Frigerio Conserva Allana Ltd. as per Table 5:

S.No.	Date of violation observed	Action taken for violation including Bank Guarantee	Date of compliance observed	No. of days of violation	Remarks, if any Summarise the violations
1	06.07.2017	Show Cause Notice issued, dt. 26.08.2017 Directions issued vide order dt. 03.08.2018 Directions issued vide order dt. 29.11.2018 and Bank Guarantee of Rs. 20.0 Lakhs forfeited. Stop production order issued dt. 02.01.2019	08.02.2019 (as per the inspection). The industry was further inspected jointly by the CPCB and TSPCB, Multi Disciplinary Team and Joint Committee and observed to be complying.	583	1. The industry is dumping the mango kernels on the open ground, which is causing foul smell in the area. 2. Seepages were observed from the mango kernel storage area. 3. The industry is discharging the contaminated rain water outside the premises. 4. The industry is treating both the Fruit Division and Meat division effluents combined in the Fruit division ETP. 5. The industry is storing the ETP sludge on open ground, leading to surface and ground water pollution. 6. The industry has not lined the sludge drying beds. 7. The industry is not maintaining good house keeping. 8. Stagnation of contaminated water were observed at the ETP area 1. Characteristic odour was observed in the surroundings, which is due to leakage of foul gases. 2. The industry is dumping the solid waste being cleared from the effluent

					collection tanks in a designated area without taking measures to control odour problem, which is causing foul smell in the area and is spreading outside the industry premises. 3. Solid waste removal from other effluent collection tanks was observed to be in progress causing foul smell in the area and is spreading outside the industry premises. 4. Huge quantity of solid waste was observed to be stored in the solid waste yard, leading to odour problem in the surroundings in spite of measures taken to control odour by sprinkling Bleaching Powder The analysis results indicate that the levels of Total Dissolved Solids, Alkalinity, Hardness and Chlorides are exceeding the drinking water standards in the bore wells within industry premises and bore well / open well in the downstream of the industry. The levels of these parameters in the bore well located in the upstream of the industry are within Standards. Lot of sludge accumulation was observed in the raw effluents collection tanks. This is also resulting in

					smell in the surroundings, not provided permanent pipeline inter connections between the units of ETPs. The industry has not complied with direction issued vide order dated: 03.08.2018 to clean the effluent collection tanks at regular intervals to avoid sludge putrification and to remove the sludge collected and transport in closed system to avoid smell nuisance in the area. Lot of sludge accumulation was observed in the raw effluents collection tanks which is resulting in smell in the surrounding areas. The industry has also not complied with the following directions issued vide order dated: 29.11.2018: a. Not provided screening and Oil & Grease trap to remove the suspended solids before raw effluent collection tanks. b. Not provided Tertiary effluent treatment such as sand / carbon filters, etc., c. Not removed the sludge collected in the raw effluent collection tanks to avoid odour nuisance. d. Not upgraded the capacity of MEE to treat all the High TDS effluents. e. Not yet engaged any institution / agency till date even after one month for carrying out

					the study on ground water quality in the upstream and downstream of the industry inspite of directions issued by the Board on 29.11.2018 to complete the same within two (2) months. Though the industry is issued with the directions from time to time, the industry failed to comply with the directions of the Board and persistent non compliance of the directions were observed.

Considering the above factors, estimation of EC is given in Table 6

Table 6: Factors considered and EC calculations for M/s. Frigerio Conserva Allana Ltd.

Sl	Period of non compliance	PI	S	LF	R (Rs)	N (days)	Environmental compensation (Rs)
1	06.07.2017 to 08.02.2019	80	1.5	1	250/-	583	**1,74,90,000/-**
	Total					**583**	**1,74,90,000/-**

The Joint Committee deliberated the violations of the industry and also discussed the scale of violations as per TSPCB records. It is observed that TSPCB has never issued any closure notice to the industry till 02.01.2019. The Multi Disciplinary Team and Joint Committee has collected the environmental samples and found to be within the permissible limits. Considering all the factors above, the Joint Committee recommended for environmental compensation per day as per the guidelines of CPCB i.e., Rs. 30,000/- per day, amounting to Rs. 1,74,90,000/- for 583 days. During the period, TSPCB has forfeited an amount of Rs. 20,00,000/- from the Bank Guarantee Submitted by the industry.

Summary and Recommendations:

M/s. Shree Siddhi Vinayaka Agro Extractions Pvt. Ltd.

The industry is a Solvent Extraction Oil (Physical Process) & De oiled cake unit, categorised as Orange by the TSPCB. The refinery section was closed w.e.f March, 2018 due to Odour nuisance and was also directed by the TSPCB to shift the unit to Industrial area, Buchinelli by December, 2020. The industry has already obtained CFE order for establishing the unit at new location, from TSPCB vide order dt. 24.10.2019.

The industry was inspected in three different occasions by the teams constituted as per the directives of the Hon'ble NGT, in O.A. No. 688/2018. In all the occasions, no major violations were observed with respect to consent conditions. However, based on the records of TSPCB, for violations for the last five years, the Joint Committee recommended an amount of Rs. 14,20,000/- (Fourteen Lakh, Twenty Thousand only), towards environmental compensation. It is also noticed that during this period, an amount of Rs. 8,00,000/- was forfeited by TSPCB, from the Bank Guarantee submitted by the industry, towards non-compliance.

TSPCB may be directed to follow up the progress made in shifting the unit to Industrial area, Buchinelli as per the CFE order issued to the unit at the new location vide order dt. 24.10.2019. The TSPCB shall also closely monitor the activities of the industry towards compliance till shifting the unit to new location.

M/s. Piramal Enterprises Ltd.

M/s. Piramal Enterprises Limited, Pharmaceutical unit manufactures 62 products with total capacity of 12.1053 TPD (i.e., 15 products on regular basis and 20 products are on campaign basis thereby restricted the number of products at a time to 35 only). The same has been restricted to 50% of consented quantity.

The industry was inspected in three different occasions by the teams constituted as per the directives of the Hon'ble NGT, in O.A. No. 688/2018. During inspection by the Rolling Task Force team, it was observed that cooling tower, water was contaminated and all the rainwater collection pits were not lined. Subsequent inspections by the Multi-Disciplinary Team and Joint Committee reported compliance of TSPCB directions.

The Joint Committee deliberated the violations of the industry and also discussed the scale of violations as per TSPCB records. It is observed that TSPCB has never issued any closure

notice to the industry till 29.11.2018. It is also reported that the major violations were non-compliance of lining of rainwater collection pits. Considering all the factors above, the Joint Committee recommended to put maximum environmental compensation per day as per the guidelines of CPCB i.e., Rs. 60,000/- per day, amounting to Rs. 8,31,60,000/-(Eight Crore Thirty One Lakh Sixty Thousand only) for 1386 days. The Multi-Disciplinary Team and Joint Committee has collected the environmental samples and found to be within the permissible limits. During the period, TSPCB has forfeited an amount of Rs. 99,00,000/-(Ninety nine Lakh only) from the Bank Guarantee submitted by the industry, for the violations by the industry.

The industry presently has 11 Nos. Rain water collection pits, lined with HDPE. The industry shall review the drainage pattern existing and only retain the necessary pits and remaining shall be closed down. An action plan for proper monitoring and treatment system for the rainwater may be submitted to TSPCB, so that the treated rainwater can be effectively used for the industrial purpose.

The industry shall monitor the groundwater quality including signature compounds and transport of contaminants as per raw materials / products / by-products, in and around the industry based on the drainage pattern on quarterly basis.

A periodic monitoring of environmental parameters in air, water and soil may be planned with reputed Government Organisations.

M/s. Frigerio Conserva Allana Ltd:

M/s. Frigerio Conserva Allana Ltd., is a fully automated meat processing unit having facilities raw meat procurement & reception, quarantine facilities, mechanised abattoirs, product chilling rooms, air conditioning deboning salons, meat packing sections, plate freezing and blast freezing facilities, in line rendering plant, automatic packing units and cold storage warehousing.

The industry was inspected in three different occasions by the teams constituted as per the directives of the Hon'ble NGT, in O.A. No. 688/2018. During inspection by the Rolling Task Force team, it was observed that huge quantities of ETP sludge was stored in open area, leading to odour nuisance. Subsequent inspections by the Multi Disciplinary Team and Joint Committee reported compliance of TSPCB directions. The industry is currently separating the sludge and using it as fuel for boiler and also disposing as manure to the farmers.

The Joint Committee deliberated the violations of the industry and also discussed the scale of violations as per TSPCB records. It is observed that TSPCB has never issued any closure notice to the industry till 02.01.2019. The Multi Disciplinary Team and Joint Committee has collected the environmental samples and found to be within the permissible limits. Considering all the factors above, the Joint Committee recommended for environmental compensation per day as per the guidelines of CPCB i.e., Rs. 30,000/- per day, amounting to Rs. 1,74,90,000/- for 583 days. During the period, TSPCB has forfeited an amount of Rs. 20,00,000/- from the Bank Guarantee Submitted by the industry, for the violations by the industry.

The industry may engage a reputed agency to study the optimum use of treated wastewater management system for the land irrigation.

The industry shall monitor on quarterly basis, the groundwater quality based on the drainage pattern in and around the industry and also odour dispersion as per meteorological conditions.

The industry shall install the online effluent monitoring system and connecting the same to the servers of TSPCB and CPCB.

Dr. Madhusudanan M.
Regional Director
(Chennai), CPCB.

Prof. Shiva Nagendra SM,
Professor, Department of
Civil Engineering,
IIT Madras.

Dr. Shaik Basha,
Scientist and Head,
CSIR-NEERI,
Hyderabad Zonal
Center.

Shri. B. Raghu,
Joint Chief Environmental
Engineer, Zonal Office,
TSPCB,
R. C Puram.

Shri. S. Karthikeyan
Scientist C, Regional
Directorate (Bengaluru),
CPCB.

Annexure-1

F.No.:CPCB/RDS/NGT688(2018)/19-20/ 1009 19th September, 2019

Minutes of the Joint Committee meeting on 16-09-2019 as per NGT, OA No 688/2018

In compliance of the Hon'ble NGT Order 688/2018, a joint committee has been constituted vide L no.: F.No.:CPCB/RDS/NGT688/2018/19-20/947 dt 6th September, 2019. The first meeting of the joint committee was held on the forenoon of 16th September, 2019 at the chamber of Zonal Officer, RC Puram, Telangana State Pollution Control Board (TSPCB). The list of members of joint Committee and the applicant, Vikas an NGO, who attended the meeting is placed at annexure – I. The minutes of the meeting are as follows:

Dr. Nageswarer Rao, Senior Environmentalist Scientist, TSPCB welcomed all the members.

Sh. Bhadresh Grish, Environmental Engineer, Sanga Reddy Regional Office-I, TSPCB has given a presentation of the case and appraised in length and depth of the issues.

Shri. B. Raghu, JCEE, coordinated the meetings/proceedings.

The representative of the applicant, four members (as per list) narrated their issues and also submitted a representation to the committee. The committee has given a patient hearing to the issues.

The decisions taken jointly are:

1. To visit all the three industries and affected areas along with the representatives of the applicant.
2. Conduct a repeat the monitoring of ETPs, Ground water and soil samples around the three industries during 25th to 27th September, 2019 tentatively.
3. It was decided to hand over the samples for analysis to any NABL EPA recognized laboratory preferably to EPTRI, JNT University, TSPCB or NEERI, Hyderabad Center depending upon the facilities and parameters.
4. Have a concluding meeting on 21st October, 2019 tentatively to discuss the outcomes of the monitoring and finalizing the draft report among the Joint Committee members only.

As per the decision taken by the Joint Committee, the members along with the representatives of the applicant, visited M/s. Primal Enterprises Ltd. and the village Digwal on 16th September, 2019 afternoon. M/s. Frigerio conserva Allana Pvt. Ltd. and M/s. Shree Siddhi Vinayaka Agro Extractions Pvt. Ltd., were visited on 17th September, 2019.

A concluding meeting was held in the evening of 17th September, 2019 and took stock of the work completed and future course of actions.

(Dr. M. Madhusudanan) 19/9/19
Regional Director
Chennai

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Annexure - 1

CENTRAL POLLUTION CONTROL BOARD
Regional Directorate, Bengaluru

First meeting of Joint Committee
Constituted in compliance of NGT Order dt 8th August, 2019
16th September, 2019 17th Sep, 2019

Attendance Form

Sl. No.	Name, Designation & Organization	Signature
1.	Dr. M. Madhusudanan, RD, Chennai, CPCB	
2.	Prof. Shiva Nagendra, IITM, Chennai	
3.	Dr. Sheikh Basha, NEERI, Hyderabad Center	
4.	Sh. B. Raghu, JCEE, TSPCB, RC Puram	
5.	Sh. S. Karthikeyan, Sci-C, CPCB, RD, Bengaluru	
6.	Dr. T. Indraseena Reddy	
7.	Dr. Narasimha Reddy Donthi	
8.	Sri. Sugunakar Rao	
9.	Sri. Narasimha Reddy	
10.	B.V. Bhadra Girish EE, TSPCB	
11.	D. Nageswar Rao SES, TSPCB	
12.	P. Jawaharlal, EE, TSPCB	

East Direction from M/s. Piramal Enterprises Ltd., (Formerly M/s. Piramal Healthcare Ltd., Unit – I, II & III), Sy. No. 71, 77, 78, 79A to 80A & 82A, Digwal (V), Kohir (M), Sangareddy District.			
Sample Code		:	
No Power Connection	About 10 mtrs	:	Bore well Water sample collected from Sri. Shankar Goud agricultural field, Sy. No: 86/O, Digwal Village, Which is located at East direction about 10 meters distance from Piramal Enterprises Ltd., compound wall.
JCW-3010	About 500 mtrs	:	Bore well Water sample collected from Sri. Kothuru Yesaiaha agricultural field, Sy. No: 113/16 E, Digwal Village, Which is located at East direction about 500 meters distance from Piramal Enterprises Ltd.,
Not in operation	About 1 KM	:	Bore well Water sample collected from Sri. B. Ramulu agricultural field, Sy. No: 111, Digwal Village, Which is located at East direction about 1 Kilometer distance from Piramal Enterprises Ltd.,

South Direction from M/s. Piramal Enterprises Ltd., (Formerly M/s. Piramal Healthcare Ltd., Unit – I, II & III), Sy. No. 71, 77, 78, 79A to 80A & 82A, Digwal (V), Kohir (M), Sangareddy District.			
Sample Code		:	
JCW-3011	About 800 mtrs	:	Bore well Water sample collected from Sri. Ledy Dileep agricultural field, Sy. No: 155, Digwal Village, Which is located at South direction about 800 meters distance from Piramal Enterprises Ltd.,
JCW-3013	About 1 KM	:	Bore well Water sample collected from Sri. Khaja agricultural field, Sy. No: 164/2 E, Digwal Village, Which is located at South direction about 1 Kilometer distance from Piramal Enterprises Ltd.,
JCW-3012	About 1 KM	:	Bore well Water sample collected from Sri. Shyamamma agricultural field, Sy. No: 151/E2, Digwal Village, Which is located at South direction about 1 Kilometer distance from Piramal Enterprises Ltd.,
JCW-3014	About 1.5 KM	:	Bore well Water sample collected from Sri. D. Krupakar agricultural field, Sy. No: 167/AA, Digwal Village, Which is located at Southwest direction about 1.5 Kilometer distance from Piramal Enterprises Ltd.,
No Power Connection	About 2.5 KM	:	Bore well Water sample collected from Sri. Narsimhulu agricultural field, Sy. No: 198/EE, Digwal Village, Which is located at Southwest direction about 2.5 Kilometer distance from Piramal Enterprises Ltd.,

Annexure.2

West Direction from M/s. Piramal Enterprises Ltd., (Formerly M/s. Piramal Healthcare Ltd., Unit – I, II & III), Sy. No. 71, 77, 78, 79A to 80A & 82A, Digwal (V), Kohir (M), Sangareddy District.			
Sample Code			
JCW-3005	About 500 mtrs	:	Bore well Water sample collected from M/s. Patel function hall, Sy. No: 1, Digwal Village, Which is located at Southwest direction about 500 meters distance from Piramal Enterprises Ltd.,
No Power Connection	About 1.2 KM	:	Bore well Water sample collected from Sri. Maqbul agricultural field, Sy. No: 17/A1/A, Digwal Village, Which is located at West direction about 1.2 KM distance from Piramal Enterprises Ltd.,
No Power Connection	About 2 KM	:	Bore well Water sample collected from Sri. Ahmath Khan agricultural field, Sy. No: 19/A3, Digwal Village, Which is located at West direction about 2 KM distance from Piramal Enterprises Ltd.,

North Direction from M/s. Piramal Enterprises Ltd., (Formerly M/s. Piramal Healthcare Ltd., Unit – I, II & III), Sy. No. 71, 77, 78, 79A to 80A & 82A, Digwal (V), Kohir (M), Sangareddy District.			
Sample Code		:	
Not in Operation	About 700 mtrs	:	Bore well Water sample collected from Sri. Budharam Narsimhulu agricultural field, Sy. No: 88/4 A, Digwal Village, Which is located at North East direction about 700 meters distance from Primal Enterprises Ltd.,
JCW-3007	About 2 KM	:	Bore well Water sample collected from Sri. P. Narsimhulu agricultural field, Sy. No: 6, Chilkapally Village, Jarasangam (M), Which is located at North East direction about 2 KM distance from Primal Enterprises Ltd.,
No Power Connection	About 3.5 KM	:	Open well Water sample collected from Chilkapally (V), Jarasangam (M), which is located at North east direction about 3.5 KM distance from Primal Enterprises Ltd.,
JCW-3008 **Referral Point**	About 4 KM	:	Bore well Water sample collected from Sri. Golla. Chandraiah agricultural field, Sy. No: 19/A, Chilkapally Village, Jarasangam (M), Which is located at North East direction about 4 KM distance from Primal Enterprises Ltd.,

Annexure - 2

Southeast Direction from M/s. Frigerio Conserva Allana Private Ltd., Unit – I (Meat Division), Sy. No: 325, Algole (V), Zaheerabad Mandal, Sangareddy District.			
Sample Code		:	
JCW-2602	About 400 mtrs	:	Open well Water sample collected from Sri. Jaipal Reddy S/o. Baga Reddy agricultural field, Thammadapalli (V), Zaheerabad (M), Sangareddy (D), Southeast direction about 400 meters distance from M/s. Frigerio Conserva Allana Private Limited.
JCW-2603	About 900 mtrs	:	Open well water sample collected from Sri K. Narasimha Reddy, S/o Kistareddy, agricultural field, Survey No.40, Thammadapalli (V), Zaheerabad (M), South East direction about 900 meters distance from M/s. Frigerio Conserva Allana Ltd.
No Power Connection	About 1.5 KM	:	Bore well Water sample collected from Smt. P. Damodar, S/o. P. Govind agricultural field, Sy. No. 34, 36, Thammadapalli (V), Zaheerabad (M), South East direction about 1.5 Kilometers distance from M/s. Frigerio Conserva Allana Ltd.
No Power Connection	About 2.2 KM	:	Open well water sample collected from Smt. Bandabai Eshwaramma, W/o. Lachi Reddy, agricultural field, Sy. No.120, Pastapur (V), Zaheerabad (M), South East direction about 2.2 Kilometers distance from M/s. Frigerio Conserva Allana Ltd.
JCW-2604	About 1.2 KM	:	Open well water sample collected from Sri K. Mahipal Reddy, S/o Manik Reddy, agricultural field, Sy. No. 41, Thammadapalli (V), Zaheerabad (M), South East direction about 1.2 KM distance from M/s. Frigerio Conserva Allana Ltd. (16/03/2019)

Annexure-2

Northeast Direction from M/s. Frigerio Conserva Allana Private Ltd., Unit – I (Meat Division), Sy. No: 325, Algole (V), Zaheerabad Mandal, Sangareddy District.			
Sample Code		:	
No Persons Available	About 50 mtrs	:	Bore well Water sample collected from Sri. Muneer Residential house, Zaheerabad (V) & (M), North direction about 50 meters distance from M/s. Frigerio Conserva Allana Ltd., compound wall.
Not in Operation	About 700 mtrs	:	Bore well Water sample collected from Smt. B. Bakkamma W/o. Manayya, agricultural field, Survey No.159, Algole (V), Zaheerabad (M), North East direction about 700 meters distance from M/s. Frigerio Conserva Allana Ltd.
No Persons Available	About 1.5 KM	:	Bore well Water sample collected from Sri. B. Maruthi S/o. Lingappa, agricultural field, Survey No.136, Algole (V), Zaheerabad (M), North East direction about 1.5 Kilometers distance from M/s. Frigerio Conserva Allana Ltd.
Not in Operation	About 2 KM	:	Grampanchayath Bore well Water sample collected from South side of Algole (V), North East direction about 2 Kilometers distance from M/s. Frigerio Conserva Allana Ltd.
JCW-3003	About 2.5 KM	:	Grampanchayath Bore well Water sample collected from Algole (V) near Hanuman Temple, North East direction about 2.5 Kilometers distance from M/s. Frigerio Conserva Allana Ltd.
JCW-3004	About 3 KM	:	Bore well Water sample collected from Smt. B. Ewaramma W/o. Narsimhulu, agricultural field, Sy. No.40, Algole (V), Zaheerabad (M), North East direction about 3 Kilometers distance from M/s. Frigerio Conserva Allana Ltd.

Annexure-2

West Direction from M/s. Frigerio Conserva Allana Private Ltd., Unit – I (Meat Division), Sy. No: 325, Algole (V), Zaheerabad Mandal, Sangareddy District.			
Sample Code		:	
JCW-3001	About 600 mtrs	:	Bore well water sample collected from Sri. B. Yadava Reddy, S/o. Rachi Reddy, Agricultural field, Sy.No.341, 342, Zaheerabad (V) & (M), South west direction about 600 mtrs distance from M/s. Frigerio Conserva Allana Ltd.
JCW-3002	About 1KM	:	Borewell water sample collected from Sri. B. Prathap Reddy S/o. Chandra Reddy, Agricultural field, Sy. No. 341/A, Zaheerabad (V) & (M), South West direction about 1 KM distance from M/s. Frigerio Conserva Allana Ltd.
Not in Operation	About 1.75 KM	:	Bore well water sample collected from Sri. Abdul Sathar S/o. Md. Hussain, Agricultural field, Zaheerabad (V) & (M), West direction about 1.75 Km distance from M/s. Frigerio Conserva Allana Ltd.
Not in Operation **Referral Point**	About 3 KM	:	Bore well water sample collected from M/s. Radhe Krishna Goseva Samithi, Agricultural field, Kothur 'B' S.No.54, Zaheerabad (V) & (M), West direction about 3 Km distance from M/s. Frigerio Conserva Allana Ltd.

Annexure. 2

South Direction from M/s. Frigerio Conserva Allana Private Ltd., Unit – I (Meat Division), Sy. No: 325, Algole (V), Zaheerabad Mandal, Sangareddy District.			
Sample Code		:	
JCW-2601	About 200 mtrs	:	Bore well sample collected from Sri. Sheelam Narsimha Reddy, Agricultural field, Sy.No.103, Zaheerabad (V) & (M), South direction, about 200 meters distance from M/s. Frigerio Conserva Allana Ltd.
Not in Operation	About 800 mtrs	:	Bore well water sample collected from Sri. Allipuram Sangareddy, S/o. Laxma Reddy, Agricultural field. Sy.No.108, Zaheerabad (V) & (M), South direction about 800 mtrs distance from M/s. Frigerio Conserva Allana Ltd.
Not in Operation	About 1KM	:	Bore well Water sample collected from Sri. B. Venkat S/o. Narsappa Agricultural field, Zaheerabad (V) & (M), South West direction about 1 Km distance from M/s. Frigerio Conserva Allana Ltd.
Not in Operation	About 1.5 KM	:	Bore well water sample collected from M/s. Indraprastha (Ventures) (Shiridi developers) Zaheerabad (V) & (M), South direction about 1.5 Km distance from M/s. Frigerio Conserva Allana Ltd.

Annexure - 2

East Direction from M/s. Shree Siddhivinayaka Agro Extractions Pvt Ltd., Sy. No. 74/2, Alipur (V), Zaheerabad (M), Sangareddy District.			
Sample Code		:	
JCW-2501	About 100 mtrs	:	Bore well water sample collected from Sri. G. Mallaiah S/o. Ramulu, Residential H. No.17/3, Shivani Nagar, Pastapur (V), Zaheerabad (M), East direction about 100 mtrs distance from M/s. Shree Siddhi Vinayaka Agro Extractions Pvt Ltd.
JCW-2507	About 800 mtrs	:	Bore well water sample collected from Sri. Narasimhulu Goud S/o. Shivaiah Goud, Residential House, Pastapur (V), Zaheerabad (M), East direction about 800 mtrs distance from M/s. Shree Siddhi Vinayaka Agro Extractions Pvt Ltd.
JCW-2505	About 1.5 KM	:	Bore well water sample collected from Sri. Omprakash Agricultural field. Sy. No. 97/2, Pastapur (V), Zaheerabad (M), East direction about 1.5 Km distance from M/s. Shree Siddhi Vinayaka Agro Extractions Pvt Ltd.
JCW-2506	About 2 KM	:	Bore well water sample collected from Sri. K. Ganapathi S/o. Gundappa Residential H. No. 67, green well gated community, Pastapur (V), Zaheerabad (M), East direction about 2 Km distance from M/s. Shree Siddhi Vinayaka Agro Extractions Pvt Ltd.

Annexure - 2

North Direction from M/s. Shree Siddhivinayaka Agro Extractions Pvt Ltd., Sy. No. 74/2, Alipur (V), Zaheerabad (M), Sangareddy District.			
Sample Code		:	
JCW-2502	About 20 mtrs	:	Bore well water sample collected from Sri. S. Rajashekar, Residential H. No. 1-6-108/71, Zaheerabad (V) & (M), North direction about 20 mtrs distance from M/s. Shree Siddhi Vinayaka Agro Extractions Pvt Ltd.
JCW-2503	About 700 mtrs	:	Bore well water sample collected from Sri. A. Srinivas, Residential H. No.16/34, Zaheerabad (V) & (M), North direction about 700 mtrs distance from M/s. Shree Siddhi Vinayaka Agro Extractions Pvt Ltd.
JCW-2504	About 1.5 KM	:	Open well water sample collected from Sri. CM. Manik Reddy S/o. Pulla Reddy Agricultural field Sy. No. 61, Thammadapalli (V), Zaheerabad (M), North direction about 1.5 Km distance from M/s. Shree Siddhi Vinayaka Agro Extractions Pvt Ltd.

West Direction from M/s. Shree Siddhivinayaka Agro Extractions Pvt Ltd., Sy. No. 74/2,

Annexure - 2

Alipur (V), Zaheerabad (M), Sangareddy District.			
Sample Code		:	
JCW-2605	About 60 mtrs	:	Bore well water sample collected from Sri. M. Srinivas S/o. Ramaiah Residential H. No. 23, Zaheerabad (V) & (M), West direction about 60 meters distance from M/s. Shree Siddhi Vinayaka Agro Extractions Pvt Ltd.,
No Persons Available	About 500 mtrs	:	Bore well water sample collected from Sri. R. Narsimha Reddy, S/o. Ram Reddy Residential H. No. 6-90, Zaheerabad (V) & (M), West direction about 500 meters distance from M/s. Shree Siddhi Vinayaka Agro Extractions Pvt Ltd.,
JCW-2607	About 1 KM	:	Bore well water sample collected from Sri. M. Yadagiri Reddy Residential H. No. 10-70, Zaheerabad (V) & (M), West direction about 1 Km distance from M/s. Shree Siddhi Vinayaka Agro Extractions Pvt Ltd.,
JCW-2606	About 1.7 KM	:	Bore well water sample collected from Sri. Md. Yusuf Qureshi, S/o. Md. Hanif Residential H. No. 1-3-120 /1/A, Zaheerabad (V) & (M), West direction about 1.7 Km distance from M/s. Shree Siddhi Vinayaka Agro Extractions Pvt Ltd.,

South Direction from M/s. Shree Siddhivinayaka Agro Extractions Pvt Ltd., Sy. No. 74/2,

Annexure-2

Alipur (V), Zaheerabad (M), Sangareddy District.			
Sample Code		:	
JCW-2508	About 50 mtrs	:	Bore well water sample collected from Methodist Central church, Zaheerabad (V) & (M), South West direction about 50 meters distance from M/s. Shree Siddhi Vinayaka Agro Extractions Pvt Ltd.,
JCW-2509	About 600 mtrs	:	Bore well water sample collected from Sri. P. Srinivas S/o. Yesaiaha Residential, Plot. No. 237, Alipur (V), Zaheerabad (M), South direction about 600 meters distance from M/s. Shree Siddhi Vinayaka Agro Extractions Pvt Ltd.,
JCW-2510	About 2 KM	:	Bore well water sample collected from Sri. Imamuddin S/o. Khajamiya agricultural field Sy. No. 139/A, Alipur (V), Zaheerabad (M), South direction about 2 Km distance from M/s. Shree Siddhi Vinayaka Agro Extractions Pvt Ltd.
JCW-2511 **Referral Point**	About 4.5 KM	:	Bore well water sample collected from Sri. Md. Muzeeb, S/o. Sadaq Ali agricultural field, Sy. No. 97, Hothi 'K' (V), Zaheerabad (M), South West direction about 4.5 Km distance from M/s. Shree Siddhi Vinayaka Agro Extractions Pvt Ltd.,

Annexure - 2

Sy. No. 71, 77, 78, 79A to 80A & 82A, Digwal (V), Kohir (M), Sangareddy District. Surroundings			
Sample Code		:	
Person Not Accepting	About 1 KM	:	Bore well Water sample collected from Sri. Azam Ali agricultural field, Digwal Village, Which is located at South direction about 1 KM distance from Piramal Enterprises Ltd.,
	About 80 Mtrs	:	Bore well Water sample collected from Sri. Budaram Sanjeeva Rao, Residential House, Digwal Village, Which is located at South direction about 80 Mtrs distance from **Pira**mal Enterprises Ltd.,
	About 1.5 KM	:	Bore well Water sample collected from Sri. Ram Reddy, agricultural field, Digwal Village, which is located at Southwest direction about 1.5 KM distance from Piramal Enterprises Ltd.,
JCW-3015	About 250 Mtrs	:	Bore well Water sample collected from Sri. Gouse agricultural field, Digwal Village, Which is located at East direction about 250 Mtrs distance from Piramal Enterprises Ltd.,
	About 1.8 KM	:	Bore well Water sample collected from Sri. Hussian Shah agricultural field, Digwal Village, Which is located at Southwest direction about 1.8 KM distance from Piramal Enterprises Ltd.,
	About 1.2 KM	:	Bore well Water sample collected from Sri. Pandurangam agricultural field, Digwal Village, Which is located at Southwest direction about 1.2 KM distance from Piramal Enterprises Ltd.,
JCW-3006	About 10 Mtrs	:	Bore well Water sample collected from Sri. Zilani agricultural field, Digwal Village, Which is located at West direction about 10 Mtrs distance from Piramal Enterprises Ltd.,
Not in Operation	About 500 Mtrs	:	Bore well Water sample collected from Sri. Gopal Reddy agricultural field, Digwal Village, Which is located at West direction about 500 Mtrs distance from Piramal Enterprises Ltd.,

(V), Zaheerabad Mandal, Sangareddy District. Surroundings			
Sample Code		:	
Not in Operation	About 600 Mtrs	:	Bore well Water sample collected from Sri. Ayub, agricultural field, Thammadapalli (V), Zaheerabad (M), South direction about 600 Mtrs distance from M/s. Frigerio Conserva Allana Ltd.
No Power Connection	About 700 Mtrs	:	Bore well Water sample collected from Sri. Aziz, agricultural field, Thammadapalli (V), Zaheerabad (M), Which is located at East direction about 700 Mtrs distance from M/s. Frigerio Conserva Allana Ltd.

1) Sample Description	:	
New Samples Code	:	
JCW-2701	:	Public hand pump water collected at Mandal Parishad Upper Primary School, Chinthalghat (V), Kohir (M), Sangareddy District.
JCW-2702	:	Public Borewell water collected near Anganwadi School, Chinthalghat (V), Kohir (M), Sangareddy District.
JCW-2703	:	Public Borewell water collected near church, Chinthalghat (V), Kohir (M), Sangareddy District.
JCW-2704	:	Public Borewell water collected at Sy. No. 110, Chinthalghat (V), Kohir (M), Sangareddy District.
JCW-2705	:	Public Borewell water collected at Sy. No. 50, Venkatapur (V), Kohir (M), Sangareddy District.
JCW-2706	:	Open well water sample collected near water tank at Madri (V), Kohir (M), Sangareddy District.
JCW-2707	:	Public Borewell water collected at adjacent to NH65 to Madri road, Madri (V), Kohir (M), Sangareddy District.

Annexure-2 (1-24)

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)

#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

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ANALYSIS REPORT

Registration Number	:	19/DWC-50	**Issue date**	: 18.10.2019
Sample received	:	01.10.2019	**Customer ref**	: 02/TSPCB/ZL/RCP/2019/
Date of Commencement	:	01.10.2019	**Lr.No. and date**	: 01.10.2019
Date of Completion	:	15.10.2019		
Name & Address of the customer	:	Sri D. Nageswar Rao Sr. Environmental Scientist (FAC) Telangana State Pollution Control Board, 25-35/11, Tulasi Reddy Complex, R.C. Puram, Sangareddy, PIN – 502 032		
Sample Particulars	:	**Bore well/ Open well water samples collected from various parts of Residential & Agricultural fields by the team with code nos JCW -2501 to JCW-2511, dt 25-09-2019,**		
Qty-received	:	2 Ltr each - in plastic containers & bottles		
Type of Sampling	:	Not mentioned		
Sample condition	:	Suitable for analysis		
Sampling Procedure	:	Sample collected and submitted by Customer		
Sample Code	:	**Sample Location**		
S- 1	:	JCW – 2501		
S- 2	:	JCW – 2502		
S- 3	:	JCW – 2503		
S- 4	:	JCW – 2504		
S- 5	:	JCW – 2505		
S- 6	:	JCW – 2506		
S- 7	:	JCW – 2507		
S- 8	:	JCW – 2508		
S- 9	:	JCW – 2509		
S- 10	:	JCW – 2510		
S- 11	:	JCW - 2511		
Date of Sampling	:	25.09.2019		
Sampled by	:	Customer		
Industry representative	:	Sri D. Nageswar Rao Sr. Environmental Scientist (FAC)		
Sub-Contracting	:	Sub-contracting was not awarded		
Deviation from Standard methods	:	No deviation in the test method.		
Sample Tested	:	As per the Standard Methods for the Examination of water & wastewater by APHA, WEF, & AWWA, 23rd Edition		
Remarks	:	Nil		

Chief Environmental Scientist

CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

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Annexure 2 (2-24)

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

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ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.N0	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results			
						S-1 2501	S-2 2502	S-3 2503	S-4 2504
1.	pH	--	4500-H^+B	6.5 to 8.5	No relaxation	7.0	7.3	7.5	6.9
2.	Turbidity	NTU	2130. B	1	5	1.8	1.6	2.1	0.9
3.	Total Dissolved Solids at 180 °C	mg/L	2540. C	500	2000	536	1610	462	450
4.	Total Alkalinity as $CaCO_3$	mg/L	2320. B	200	600	126	272	289	252
5.	Total Hardness as $CaCO_3$	mg/L	2340. C	200	600	65	685	120	335
6.	Chlorides as Cl^-	mg/L	4500-Cl^-.B	250	1000	150	467	57	72
7.	Fluoride as F^-	mg/L	4500-F^-.C	1.0	1.5	0.64	0.59	0.61	0.66
8.	Sulphates as SO_4^{2-}	mg/L	4500-SO_4^{2-}.E	200	400	83	250	15	8
9.	Nitrates as NO_3^-	mg/L	4500. NO_3^-.B	45	No relaxation	8	16	14	50
10.	Calcium as Ca	mg/L	3500-Ca.B	75	200	20	190	40	66
11.	Magnesium as Mg	mg/L	3500-Mg.B	30	100	4	51	4.8	41
12.	Phenolic Compounds as C_6H_5OH	mg/L	5530. D	0.001	0.002	BDL	BDL	BDL	BDL
13.	Colour	Pt.Co	2120. B	5	15	5	<5	<5	<5
14.	Mineral Oil	mg/L	IS:3025 (Part 39)	0.5	No relaxation	Absent	Absent	Absent	Absent
15.	Anionic Detergents	mg/L	IS:13428 2005 K	0.2	1.0	<0.2	<0.2	<0.2	<0.2
16.	Hexavalent Chromium as Cr^{+6}	mg/L	3500.Cr^{+6}.B	-	-	BDL	BDL	BDL	BDL
17.	Sodium as Na	mg/L	3500-Na.B	-	-	113	470	86	37
18.	Potassium as K	mg/L	3500-K.B	-	-	5	8	5	2
19.	Chemical Oxygen Demand	mg/L	5220. B	-	-	8	12	8	12
20.	Na%		By Calculation	-	-	X	X	X	25
21.	SAR		By Calculation			X	X	X	0.88
22.	RSC		By Calculation			X	X	X	-2.5

Chief Environmental Scientist

CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

Annexure 2 (3-24)

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

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ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.No	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results			
						S-1 2501	S-2 2502	S-3 2503	S-4 2504
23.	Boron as B	mg/L	3120. B	0.5	1.0	0.08	0.04	0.07	0.06
24.	Iron as Fe	mg/L	3120. B	0.3	No relaxation	0.1	0.42	0.88	0.29
25.	Cadmium as Cd	mg/L	3120. B	0.003	No relaxation	BDL	BDL	BDL	BDL
26.	Copper as Cu	mg/L	3120. B	0.05	1.5	BDL	BDL	BDL	BDL
27.	Total Chromium as Cr	mg/L	3120. B	0.05	No relaxation	BDL	BDL	BDL	BDL
28.	Lead as Pb	mg/L	3120. B	0.01	No relaxation	BDL	BDL	BDL	BDL
29.	Manganese as Mn	mg/L	3120. B	0.1	0.3	BDL	0.02	BDL	BDL
30.	Zinc as Zn	mg/L	3120. B	5	15	BDL	0.05	BDL	BDL
31.	Nickel as Ni	mg/L	3120. B	0.02	No relaxation	BDL	BDL	BDL	BDL
32.	Total Coliform	MPN/100 mL	9221 B	-	-	<1.8	<1.8	<1.8	<1.8
33.	*E. coli*	Presence or Absence/ 100 mL	9221 F	-	-	Absent	Absent	Absent	Absent

Chief Environmental Scientist

CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

Annexure 2 (24-24)

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ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.N0	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results			
						S-5 2505	S-6 2506	S-7 2507	S-8 2508
1.	pH	--	4500-H^+B	6.5 to 8.5	No relaxation	7.0	7.0	6.9	7.1
2.	Turbidity	NTU	2130. B	1	5	1.0	0.8	1.3	1.5
3.	Total Dissolved Solids at 180 °C	mg/L	2540. C	500	2000	574	620	785	734
4.	Total Alkalinity as $CaCO_3$	mg/L	2320. B	200	600	389	436	457	567
5.	Total Hardness as $CaCO_3$	mg/L	2340. C	200	600	330	275	420	325
6.	Chlorides as Cl^-	mg/L	4500-Cl^-.B	250	1000	62	38	162	65
7.	Fluoride as F^-	mg/L	4500-F^-.C	1.0	1.5	0.56	0.61	0.75	0.52
8.	Sulphates as SO_4^{2-}	mg/L	4500-SO_4^{2-}.E	200	400	22	12	28	34
9.	Nitrates as NO_3^-	mg/L	4500. NO_3^-.B	45	No relaxation	30	25	40	27
10.	Calcium as Ca	mg/L	3500-Ca.B	75	200	50	94	64	55
11.	Magnesium as Mg	mg/L	3500-Mg.B	30	100	49	40	63	50
12.	Phenolic Compounds as C_6H_5OH	mg/L	5530. D	0.001	0.002	BDL	BDL	BDL	BDL
13.	Colour	Pt.Co	2120. B	5	15	<5	<5	<5	<5
14.	Mineral Oil	mg/L	IS:3025 (Part 39)	0.5	No relaxation	Absent	Absent	Absent	Absent
15.	Anionic Detergents	mg/L	IS:13428 2005 K	0.2	1.0	<0.2	<0.2	<0.2	<0.2
16.	Hexavalent Chromium as Cr^{+6}	mg/L	3500.Cr^{+6}.B	-	-	BDL	BDL	BDL	BDL
17.	Sodium as Na	mg/L	3500-Na.B	-	-	57	84	81	107
18.	Potassium as K	mg/L	3500-K.B	-	-	2.6	2.7	3	1.8
19.	Chemical Oxygen Demand	mg/L	5220. B	-	-	12	8	8	12
20.	Na%		By Calculation	-	-	36	X	X	X
21.	SAR		By Calculation			1.37	X	X	X
22.	RSC		By Calculation			-0.15	X	X	X

Chief Environmental Scientist

CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

Annexure 2 (5-24)

EPTRI
CPCB & DSIR
Recognized Laboratory

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.No	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results			
						S-5 2505	S-6 2506	S-7 2507	S-8 2508
23.	Boron as B	mg/L	3120. B	0.5	1.0	0.05	0.11	0.08	0.06
24.	Iron as Fe	mg/L	3120. B	0.3	No relaxation	0.33	0.11	0.21	0.17
25.	Cadmium as Cd	mg/L	3120. B	0.003	No relaxation	BDL	BDL	BDL	BDL
26.	Copper as Cu	mg/L	3120. B	0.05	1.5	BDL	BDL	BDL	BDL
27.	Total Chromium as Cr	mg/L	3120. B	0.05	No relaxation	BDL	BDL	BDL	BDL
28.	Lead as Pb	mg/L	3120. B	0.01	No relaxation	BDL	BDL	BDL	BDL
29.	Manganese as Mn	mg/L	3120. B	0.1	0.3	BDL	BDL	BDL	BDL
30.	Zinc as Zn	mg/L	3120. B	5	15	0.06	BDL	0.05	BDL
31.	Nickel as Ni	mg/L	3120. B	0.02	No relaxation	BDL	BDL	BDL	BDL
32.	Total Coliform	MPN/100 mL	9221 B	-	-	<1.8	<1.8	<1.8	<1.8
33.	*E. coli*	Presence or Absence/ 100 mL	9221 F	-	-	Absent	Absent	Absent	Absent

Chief Environmental Scientist

CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

Annexure 2 (6/24)

EPTRI
CPCB & DSIR
Recognized Laboratory

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.N0	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results		
						S-9 2509	S-10 2510	S-11 2511
1.	pH	--	4500-H^+B	6.5 to 8.5	No relaxation	7.0	7.0	7.1
2.	Turbidity	NTU	2130. B	1	5	0.9	1.3	0.8
3.	Total Dissolved Solids at 180 °C	mg/L	2540. C	500	2000	610	460	610
4.	Total Alkalinity as $CaCO_3$	mg/L	2320. B	200	600	320	362	210
5.	Total Hardness as $CaCO_3$	mg/L	2340. C	200	600	325	330	210
6.	Chlorides as Cl^-	mg/L	4500-Cl^-.B	250	1000	115	30	32
7.	Fluoride as F^-	mg/L	4500-F^-.C	1.0	1.5	0.49	0.53	0.61
8.	Sulphates as SO_4^{2-}	mg/L	4500-SO_4^{2-}.E	200	400	21	14	9
9.	Nitrates as NO_3^-	mg/L	4500. NO_3^-.B	45	No relaxation	42	36	26
10.	Calcium as Ca	mg/L	3500-Ca.B	75	200	80	52	32
11.	Magnesium as Mg	mg/L	3500-Mg.B	30	100	49	48	31
12.	Phenolic Compounds as C_6H_5OH	mg/L	5530. D	0.001	0.002	BDL	BDL	BDL
13.	Colour	Pt.Co	2120. B	5	15	<5	<5	<5
14.	Mineral Oil	mg/L	IS:3025 (Part 39)	0.5	No relaxation	Absent	Absent	Absent
15.	Anionic Detergents	mg/L	IS:13428 2005 K	0.2	1.0	<0.2	<0.2	<0.2
16.	Hexavalent Chromium as Cr^{+6}	mg/L	3500.Cr^{+6}.B	-	-	BDL	BDL	BDL
17.	Sodium as Na	mg/L	3500-Na.B	-	-	80	38	17
18.	Potassium as K	mg/L	3500-K.B	-	-	3	2	0.9
19.	Chemical Oxygen Demand	mg/L	5220. B	-	-	12	12	8
20.	Na%		By Calculation	-	-	X	27	21
21.	SAR		By Calculation			X	0.91	0.51
22.	RSC		By Calculation			X	-0.61	-0.71

Chief Environmental Scientist

CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI HYDERABAD

Annexure-2 (7/24)

EPTRI
CPCB & DSIR
Recognized Laboratory

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.No	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results		
						S-9 2509	S-10 2510	S-11 2511
23.	Boron as B	mg/L	3120. B	0.5	1.0	0.11	0.07	0.04
24.	Iron as Fe	mg/L	3120. B	0.3	No relaxation	0.77	0.33	0.11
25.	Cadmium as Cd	mg/L	3120. B	0.003	No relaxation	BDL	BDL	BDL
26.	Copper as Cu	mg/L	3120. B	0.05	1.5	BDL	BDL	BDL
27.	Total Chromium as Cr	mg/L	3120. B	0.05	No relaxation	BDL	BDL	BDL
28.	Lead as Pb	mg/L	3120. B	0.01	No relaxation	BDL	BDL	BDL
29.	Manganese as Mn	mg/L	3120. B	0.1	0.3	BDL	BDL	BDL
30.	Zinc as Zn	mg/L	3120. B	5	15	0.06	BDL	BDL
31.	Nickel as Ni	mg/L	3120. B	0.02	No relaxation	BDL	BDL	BDL
32.	Total Coliform	MPN/100 mL	9221 B	-	-	<1.8	<1.8	<1.8
33.	*E. coli*	Presence or Absence/ 100 mL	9221 F	-	-	Absent	Absent	Absent

Opinion and Interpretation: Not Applicable.
BDL – Below detection limit
Detection limit - Residual Free chlorine – 1mg/L; Cyanide as CN^- - 0.05mg/L; Phenolic Compounds as C_6H_5OH – 0.01 mg/L; Sulfide as S^{2-} - 0.05mg/L; Mercury as Hg – 0.02mg/L; Hexavalent Chromium as Cr^{+6} – 0.05mg/L;

Chief Environmental Scientist

CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

Annexure-2 (8/24)

EPTRI
CPCB & DSIR
Recognized Laboratory

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

ANALYSIS REPORT

Registration Number	:	19/DWC-50	**Issue date**	: 18.10.2019
Sample received	:	01.10.2019	**Customer ref**	: 02/TSPCB/ZL/RCP/2019/
Date of Commencement	:	01.10.2019	**Lr.No. and date**	: 01.10.2019
Date of Completion	:	15.10.2019		
Name & Address of the customer	:	Sri D. Nageswar Rao Sr. Environmental Scientist (FAC) Telangana State Pollution Control Board, 25-35/11, Tulasi Reddy Complex, R.C. Puram, Sangareddy, PIN – 502 032		
Sample Particulars	:	**Bore well/ Open well water samples collected from various parts of Residential & Agricultural fields by the team with code nos JCW -2601 to JCW-2607, dt 26-9-19,**		
Qty-received	:	2 Ltr each - in plastic containers & bottles		
Type of Sampling	:	Not mentioned		
Sample condition	:	Suitable for analysis		
Sampling Procedure	:	Sample collected and submitted by Customer		
Sample Code	:	**Sample Location**		
S- 12	:	JCW – 2601		
S- 13	:	JCW – 2602		
S- 14	:	JCW – 2603		
S- 15	:	JCW – 2604		
S- 16	:	JCW – 2605		
S- 17	:	JCW – 2606		
S- 18	:	JCW – 2607		
Date of Sampling	:	26.09.2019		
Sampled by	:	Customer		
Industry representative	:	Sri D. Nageswar Rao Sr. Environmental Scientist (FAC)		
Sub-Contracting	:	Sub-contracting was not awarded		
Deviation from Standard methods	:	No deviation in the test method.		
Sample Tested	:	As per the Standard Methods for the Examination of water & wastewater by APHA, WEF, & AWWA, 23rd Edition		
Remarks	:	Nil		

Chief Environmental Scientist

CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

Annexure-2 (9/24)

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

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ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.N0	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results				
						S-12 2601	S-13 2602	S-14 2603	S-15 2604	S-16 2605
1.	pH	--	4500-H^+B	6.5 to 8.5	No relaxation	6.3	6.7	6.7	6.8	7.3
2.	Turbidity	NTU	2130. B	1	5	1.2	1.2	1.6	1.1	1.4
3.	Total Dissolved Solids at 180 °C	mg/L	2540. C	500	2000	1405	632	262	586	659
4.	Total Alkalinity as $CaCO_3$	mg/L	2320. B	200	600	184	205	142	284	341
5.	Total Hardness as $CaCO_3$	mg/L	2340. C	200	600	455	350	175	340	250
6.	Chlorides as Cl^-	mg/L	4500-Cl^-.B	250	1000	310	177	42	132	165
7.	Fluoride as F^-	mg/L	4500-F^-.C	1.0	1.5	0.71	0.78	0.63	0.66	0.78
8.	Sulphates as SO_4^{2-}	mg/L	4500-SO_4^{2-}.E	200	400	160	88	10	19	26
9.	Nitrates as NO_3^-	mg/L	4500. NO_3^-.B	45	No relaxation	34	22	42	47	26
10.	Calcium as Ca	mg/L	3500-Ca.B	75	200	110	80	46	128	36
11.	Magnesium as Mg	mg/L	3500-Mg.B	30	100	58	36	14	5	39
12.	Phenolic Compounds as C_6H_5OH	mg/L	5530. D	0.001	0.002	BDL	BDL	BDL	BDL	BDL
13.	Colour	Pt.Co	2120. B	5	15	5	5	<5	<5	<5
14.	Mineral Oil	mg/L	IS:3025 (Part 39)	0.5	No relaxation	Absent	Absent	Absent	Absent	Absent
15.	Anionic Detergents	mg/L	IS:13428 2005 K	0.2	1.0	<0.2	<0.2	<0.2	<0.2	<0.2
16.	Hexavalent Chromium as Cr^{+6}	mg/L	3500.Cr^{+6}.B	-	-	BDL	BDL	BDL	BDL	BDL
17.	Sodium as Na	mg/L	3500-Na.B	-	-	89	33	13	36	116
18.	Potassium as K	mg/L	3500-K.B	-	-	4.5	0.7	0.76	1	4
19.	Chemical Oxygen Demand	mg/L	5220. B	-	-	8	12	10	8	12
20.	Na%		By Calculation	-	-	34	22	18	21	X
21.	SAR		By Calculation			1.71	0.77	0.43	0.85	X
22.	RSC		By Calculation			-7.25	-3.59	-1.12	-2.14	X

Chief Environmental Scientist
CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

Annexure 2 (10/24)

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

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ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.No	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results				
						S-12 2601	S-13 2602	S-14 2603	S-15 2604	S-16 2605
23.	Boron as B	mg/L	3120. B	0.5	1.0	0.13	0.17	0.09	0.10	0.07
24.	Iron as Fe	mg/L	3120. B	0.3	No relaxation	0.21	0.30	0.26	0.40	0.33
25.	Cadmium as Cd	mg/L	3120. B	0.003	No relaxation	BDL	BDL	BDL	BDL	BDL
26.	Copper as Cu	mg/L	3120. B	0.05	1.5	BDL	BDL	BDL	BDL	BDL
27.	Total Chromium as Cr	mg/L	3120. B	0.05	No relaxation	BDL	BDL	BDL	BDL	BDL
28.	Lead as Pb	mg/L	3120. B	0.01	No relaxation	BDL	BDL	BDL	BDL	BDL
29.	Manganese as Mn	mg/L	3120. B	0.1	0.3	0.02	BDL	BDL	BDL	BDL
30.	Zinc as Zn	mg/L	3120. B	5	15	BDL	BDL	BDL	BDL	BDL
31.	Nickel as Ni	mg/L	3120. B	0.02	No relaxation	BDL	BDL	BDL	BDL	BDL
32.	Total Coliform	MPN/100 mL	9221A & B	-	-	<1.8	<1.8	<1.8	<1.8	<1.8
33.	*E. coli*	Presence or Absence/ 100 mL	9221 F	-	-	Absent	Absent	Absent	Absent	Absent

Chief Environmental Scientist

CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

Annexure - 2 (11/24)

EPTRI
CPCB & DSIR
Recognized Laboratory

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.N0	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results	
						S-17 2606	S-18 2607
1.	pH	--	4500-H^+B	6.5 to 8.5	No relaxation	6.9	7.0
2.	Turbidity	NTU	2130. B	1	5	0.8	1.4
3.	Total Dissolved Solids at 180 °C	mg/L	2540. C	500	2000	874	1072
4.	Total Alkalinity as $CaCO_3$	mg/L	2320. B	200	600	415	452
5.	Total Hardness as $CaCO_3$	mg/L	2340. C	200	600	485	562
6.	Chlorides as Cl^-	mg/L	4500-Cl^-.B	250	1000	240	342
7.	Fluoride as F^-	mg/L	4500-F^-.C	1.0	1.5	0.56	0.72
8.	Sulphates as SO_4^{2-}	mg/L	4500-SO_4^{2-}.E	200	400	24	18
9.	Nitrates as NO_3^-	mg/L	4500. NO_3^-.B	45	No relaxation	46	40
10.	Calcium as Ca	mg/L	3500-Ca.B	75	200	88	120
11.	Magnesium as Mg	mg/L	3500-Mg.B	30	100	64	97
12.	Phenolic Compounds as C_6H_5OH	mg/L	5530. D	0.001	0.002	BDL	BDL
13.	Colour	Pt.Co	2120. B	5	15	5	<5
14.	Mineral Oil	mg/L	IS:3025 (Part 39)	0.5	No relaxation	Absent	Absent
15.	Anionic Detergents	mg/L	IS:13428 2005 K	0.2	1.0	<0.2	<0.2
16.	Hexavalent Chromium as Cr^{+6}	mg/L	3500.Cr^{+6}.B	-	-	BDL	BDL
17.	Sodium as Na	mg/L	3500-Na.B	-	-	92	83
18.	Potassium as K	mg/L	3500-K.B	-	-	4	3
19.	Chemical Oxygen Demand	mg/L	5220. B	-	-	10	8

Chief Environmental Scientist

CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

Annexure 2 (12/24)

EPTRI
CPCB & DSIR
Recognized Laboratory

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.No	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results	
						S-17 2606	S-18 2607
20.	Boron as B	mg/L	3120. B	0.5	1.0	0.13	0.04
21.	Iron as Fe	mg/L	3120. B	0.3	No relaxation	0.22	0.20
22.	Cadmium as Cd	mg/L	3120. B	0.003	No relaxation	BDL	BDL
23.	Copper as Cu	mg/L	3120. B	0.05	1.5	BDL	BDL
24.	Total Chromium as Cr	mg/L	3120. B	0.05	No relaxation	BDL	BDL
25.	Lead as Pb	mg/L	3120. B	0.01	No relaxation	BDL	BDL
26.	Manganese as Mn	mg/L	3120. B	0.1	0.3	BDL	BDL
27.	Zinc as Zn	mg/L	3120. B	5	15	BDL	BDL
28.	Nickel as Ni	mg/L	3120. B	0.02	No relaxation	BDL	BDL
29.	Total Coliform	MPN/100 mL	9221B	-	-	<1.8	<1.8
30.	*E. coli*	Presence or Absence/ 100 mL	9221 F	-	-	Absent	Absent

Opinion and Interpretation: Not Applicable.
BDL – Below detection limit
Detection limit - Residual Free chlorine – 1mg/L; Cyanide as CN^- - 0.05mg/L; Phenolic Compounds as C_6H_5OH – 0.01 mg/L; Sulfide as S^{2-} - 0.05mg/L; Mercury as Hg – 0.02mg/L; Hexavalent Chromium as Cr^{+6} – 0.05mg/L;

Chief Environmental Scientist

CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

Annexure - 2 (13/24)

EPTRI
CPCB & DSIR
Recognized Laboratory

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

ANALYSIS REPORT

Registration Number	: 19/DWC-50	**Issue date**	: 18.10.2019	
Sample received	: 01.10.2019	**Customer ref**	: 02/TSPCB/ZL/RCP/2019/	
Date of Commencement	: 01.10.2019	**Lr.No. and date**	: 01.10.2019	
Date of Completion	: 15.10.2019			
Name & Address of the customer	: Sri D. Nageswar Rao Sr. Environmental Scientist (FAC) Telangana State Pollution Control Board, 25-35/11, Tulasi Reddy Complex, R.C. Puram, Sangareddy, PIN – 502 032			
Sample Particulars	: **Bore well/ Open well water samples collected from various parts of Residential & Agricultural fields by the team with code nos JCW 2701 toJCW 2707 dt. 27.09.19,**			
Qty-received	: 2 Ltr each - in plastic containers & bottles			
Type of Sampling	: Not mentioned			
Sample condition	: Suitable for analysis			
Sampling Procedure	: Sample collected and submitted by Customer			
Sample Code	: **Sample Location**			
S- 1	: JCW – 2701			
S- 2	: JCW – 2702			
S- 3	: JCW – 2703			
S- 4	: JCW – 2704			
S- 5	: JCW – 2705			
S- 6	: JCW – 2706			
S- 7	: JCW – 2707			
Date of Sampling	: 27.09.2019			
Sampled by	: Customer			
Industry representative	: Sri D. Nageswar Rao Sr. Environmental Scientist (FAC)			
Sub-Contracting	: Sub-contracting was not awarded			
Deviation from Standard methods	: No deviation in the test method.			
Sample Tested	: As per the Standard Methods for the Examination of water & wastewater by APHA, WEF, & AWWA, 23rd Edition			
Remarks	: Nil			

Chief Environmental Scientist
CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

Annexure 2 (14/24)

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CPCB & DSIR
Recognized Laboratory

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.N0	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results			
						S-19 2701	S-20 2702	S-21 2703	S-22 2704
1.	pH	--	4500-H^+B	6.5 to 8.5	No relaxation	7.1	7.2	7.5	7.2
2.	Turbidity	NTU	2130. B	1	5	0.9	1.2	1.1	0.8
3.	Total Dissolved Solids at 180 °C	mg/L	2540. C	500	2000	842	670	542	635
4.	Total Alkalinity as $CaCO_3$	mg/L	2320. B	200	600	488	383	352	336
5.	Total Hardness as $CaCO_3$	mg/L	2340. C	200	600	550	365	295	355
6.	Chlorides as Cl^-	mg/L	4500-Cl^-.B	250	1000	175	97	60	130
7.	Fluoride as F^-	mg/L	4500-F^-.C	1.0	1.5	0.63	0.58	0.65	0.49
8.	Sulphates as SO_4^{2-}	mg/L	4500-SO_4^{2-}.E	200	400	16	13	18	22
9.	Nitrates as NO_3^-	mg/L	4500. NO_3^-.B	45	No relaxation	39	40	47	10
10.	Calcium as Ca	mg/L	3500-Ca.B	75	200	92	64	44	52
11.	Magnesium as Mg	mg/L	3500-Mg.B.	30	100	78	50	45	55
12.	Phenolic Compounds as C_6H_5OH	mg/L	5530. D	0.001	0.002	BDL	BDL	BDL	BDL
13.	Colour	Pt.Co	2120. B	5	15	5	<5	<5	<5
14.	Mineral Oil	mg/L	IS:3025 (Part 39)	0.5	No relaxation	Absent	Absent	Absent	Absent
15.	Anionic Detergents	mg/L	IS:13428 2005 K	0.2	1.0	<0.2	<0.2	<0.2	<0.2
16.	Hexavalent Chromium as Cr^{+6}	mg/L	3500.Cr^{+6}.B	-	-	BDL	BDL	BDL	BDL
17.	Sodium as Na	mg/L	3500-Na.B	-	-	76	75	71	75
18.	Potassium as K	mg/L	3500-K.B	-	-	2	4	2.2	4
19.	Chemical Oxygen Demand	mg/L	5220. B	-	-	12	8	8	8

Chief Environmental Scientist
CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

Annexure-2 (15/24)

EPTRI
CPCB & DSIR
Recognized Laboratory

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.No	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results			
						S-19 2701	S-20 2702	S-21 2703	S-22 2704
20.	Boron as B	mg/L	3120. B	0.5	1.0	0.11	0.08	0.09	0.06
21.	Iron as Fe	mg/L	3120. B	0.3	No relaxation	0.75	0.52	0.19	0.13
22.	Cadmium as Cd	mg/L	3120. B	0.003	No relaxation	BDL	BDL	BDL	BDL
23.	Copper as Cu	mg/L	3120. B	0.05	1.5	BDL	BDL	BDL	BDL
24.	Total Chromium as Cr	mg/L	3120. B	0.05	No relaxation	BDL	BDL	BDL	BDL
25.	Lead as Pb	mg/L	3120. B	0.01	No relaxation	BDL	BDL	BDL	BDL
26.	Manganese as Mn	mg/L	3120. B	0.1	0.3	BDL	BDL	BDL	BDL
27.	Zinc as Zn	mg/L	3120. B	5	15	0.08	BDL	BDL	BDL
28.	Nickel as Ni	mg/L	3120. B	0.02	No relaxation	BDL	BDL	BDL	BDL
29.	Total Coliform	MPN/100 mL	9221 B	-	-	<1.8	<1.8	<1.8	<1.8
30.	*E. coli*	Presence or Absence/ 100 mL	9221 F	-	-	Absent	Absent	Absent	Absent

Opinion and Interpretation: Not Applicable.
BDL – Below detection limit
Detection limit - Residual Free chlorine – 1mg/L; Cyanide as CN^- - 0.05mg/L; Phenolic Compounds as C_6H_5OH – 0.01 mg/L; Sulfide as S^{2-} - 0.05mg/L; Mercury as Hg – 0.02mg/L; Hexavalent Chromium as Cr^{+6} – 0.05mg/L;

Chief Environmental Scientist

CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

Annexure 2 (16/24)

EPTRI
CPCB & DSIR
Recognized Laboratory

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.N0	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results		
						S-23 2705	S-24 2706	S-25 2707
1.	pH	--	4500-H^+B	6.5 to 8.5	No relaxation	7.3	7.0	7.1
2.	Turbidity	NTU	2130. B	1	5	1.4	1.1	1.0
3.	Total Dissolved Solids at 180 °C	mg/L	2540. C	500	2000	1020	604	622
4.	Total Alkalinity as $CaCO_3$	mg/L	2320. B	200	600	331	289	300
5.	Total Hardness as $CaCO_3$	mg/L	2340. C	200	600	735	395	330
6.	Chlorides as Cl^-	mg/L	4500-Cl^-.B	250	1000	430	115	147
7.	Fluoride as F^-	mg/L	4500-F^-.C	1.0	1.5	0.62	0.58	0.72
8.	Sulphates as SO_4^{2-}	mg/L	4500-SO_4^{2-}.E	200	400	28	24	33
9.	Nitrates as NO_3^-	mg/L	4500. NO_3^-.B	45	No relaxation	9	46	11
10.	Calcium as Ca	mg/L	3500-Ca.B	75	200	116	64	52
11.	Magnesium as Mg	mg/L	3500-Mg.B	30	100	108	57	48
12.	Phenolic Compounds as C_6H_5OH	mg/L	5530. D	0.001	0.002	BDL	BDL	BDL
13.	Colour	Pt.Co	2120. B	5	15	<5	<5	<5
14.	Mineral Oil	mg/L	IS:3025 (Part 39)	0.5	No relaxation	Absent	Absent	Absent
15.	Anionic Detergents	mg/L	IS:13428 2005 K	0.2	1.0	<0.2	<0.2	<0.2
16.	Hexavalent Chromium as Cr^{+6}	mg/L	3500.Cr^{+6}.B	-	-	BDL	BDL	BDL
17.	Sodium as Na	mg/L	3500-Na.B	-	-	71	63	62
18.	Potassium as K	mg/L	3500-K.B	-	-	2.9	3.5	4
19.	Chemical Oxygen Demand	mg/L	5220. B	-	-	12	8	8

Chief Environmental Scientist

CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

Annexure-2 (17/24)

EPTRI
CPCB & DSIR
Recognized Laboratory

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.No	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results		
						S-23 2705	S-24 2706	S-25 2707
20.	Boron as B	mg/L	3120. B	0.5	1.0	0.04	0.11	0.05
21.	Iron as Fe	mg/L	3120. B	0.3	No relaxation	0.08	0.30	0.15
22.	Cadmium as Cd	mg/L	3120. B	0.003	No relaxation	BDL	BDL	BDL
23.	Copper as Cu	mg/L	3120. B	0.05	1.5	BDL	BDL	BDL
24.	Total Chromium as Cr	mg/L	3120. B	0.05	No relaxation	BDL	BDL	BDL
25.	Lead as Pb	mg/L	3120. B	0.01	No relaxation	BDL	BDL	BDL
26.	Manganese as Mn	mg/L	3120. B	0.1	0.3	BDL	BDL	BDL
27.	Zinc as Zn	mg/L	3120. B	5	15	BDL	BDL	BDL
28.	Nickel as Ni	mg/L	3120. B	0.02	No relaxation	BDL	BDL	BDL
29.	Total Coliform	MPN/100 mL	9221 B	-	-	<1.8	<1.8	<1.8
30.	*E. coli*	Presence or Absence/ 100 mL	9221 F	-	-	Absent	Absent	Absent

Opinion and Interpretation: Not Applicable.
BDL – Below detection limit
Detection limit - Residual Free chlorine – 1mg/L; Cyanide as CN^- - 0.05mg/L; Phenolic Compounds as C_6H_5OH – 0.01 mg/L; Sulfide as S^{2-} - 0.05mg/L; Mercury as Hg – 0.02mg/L; Hexavalent Chromium as Cr^{+6} – 0.05mg/L;

Chief Environmental Scientist

CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

Annexure - 2 (18/24)

EPTRI
CPCB & DSIR
Recognized Laboratory

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

ANALYSIS REPORT

Registration Number	:	19/DWC-50	**Issue date**	: 18.10.2019
Sample received	:	01.10.2019	**Customer ref**	: 02/TSPCB/ZL/RCP/2019/
Date of Commencement	:	01.10.2019	**Lr.No. and date**	: 01.10.2019
Date of Completion	:	15.10.2019		
Name & Address of the customer	:	Sri D. Nageswar Rao Sr. Environmental Scientist (FAC) Telangana State Pollution Control Board, 25-35/11, Tulasi Reddy Complex, R.C. Puram, Sangareddy, PIN – 502 032		
Sample Particulars	:	**Bore well/ Open well water samples collected from various parts of Residential & Agricultural fields by the team with code nos JCW 3001 to JCW-3015, dt. 30.09.19**		
Qty-received	:	2 Ltr each - in plastic containers & bottles		
Type of Sampling	:	Not mentioned		
Sample condition	:	Suitable for analysis		
Sampling Procedure	:	Sample collected and submitted by Customer		
Sample Code	:	**Sample Location**		
S- 1	:	JCW – 3001		
S- 2	:	JCW – 3002		
S- 3	:	JCW – 3003		
S- 4	:	JCW – 3004		
S- 5	:	JCW – 3005		
S- 6	:	JCW – 3006		
S- 7	:	JCW – 3007		
S- 8	:	JCW – 3008		
S- 9	:	JCW – 3009		
S- 10	:	JCW – 3010		
S- 11	:	JCW – 3011		
S- 12	:	JCW – 3012		
S- 13	:	JCW – 3013		
S- 14	:	JCW – 3014		
S- 15	:	JCW – 3015		
Date of Sampling	:	30.09.2019		
Sampled by	:	Customer		
Industry representative	:	Sri D. Nageswar Rao Sr. Environmental Scientist (FAC)		
Sub-Contracting	:	Sub-contracting was not awarded		
Deviation from Standard methods	:	No deviation in the test method.		
Sample Tested	:	As per the Standard Methods for the Examination of water & wastewater by APHA, WEF, & AWWA, 23rd Edition		
Remarks	:	Nil		

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CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

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EPTRI
CPCB & DSIR
Recognized Laboratory

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.N0	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results				
						S-26 3001	S-27 3002	S-28 3003	S-29 3004	S-30 3005
1.	pH	--	4500-H^+B	6.5 to 8.5	No relaxation	6.7	6.8	6.9	7.2	7.5
2.	Turbidity	NTU	2130. B	1	5	0.8	0.8	1.1	1.3	0.8
3.	Total Dissolved Solids at 180 °C	mg/L	2540. C	500	2000	202	340	814	730	482
4.	Total Alkalinity as $CaCO_3$	mg/L	2320. B	200	600	147	263	263	341	126
5.	Total Hardness as $CaCO_3$	mg/L	2340. C	200	600	120	225	390	375	240
6.	Chlorides as Cl^-	mg/L	4500-Cl^-.B	250	1000	30	35	262	215	175
7.	Fluoride as F^-	mg/L	4500-F^-.C	1.0	1.5	0.53	0.56	0.70	0.75	0.61
8.	Sulphates as SO_4^{2-}	mg/L	4500-SO_4^{2-}.E	200	400	8	6	44	12	6
9.	Nitrates as NO_3^-	mg/L	4500. NO_3^-.B	45	No relaxation	4	22	27	9	11
10.	Calcium as Ca	mg/L	3500-Ca.B	75	200	28	36	60	58	40
11.	Magnesium as Mg	mg/L	3500-Mg.B	30	100	12	33	58	56	34
12.	Phenolic Compounds as C_6H_5OH	mg/L	5530. D	0.001	0.002	BDL	BDL	BDL	BDL	BDL
13.	Colour	Pt.Co	2120. B	5	15	<5	<5	<5	<5	<5
14.	Mineral Oil	mg/L	IS:3025 (Part 39)	0.5	No relaxation	Absent	Absent	Absent	Absent	Absent
15.	Anionic Detergents	mg/L	IS:13428 2005 K	0.2	1.0	<0.2	<0.2	<0.2	<0.2	<0.2
16.	Hexavalent Chromium as Cr^{+6}	mg/L	3500.Cr^{+6}.B	-	-	BDL	BDL	BDL	BDL	BDL
17.	Sodium as Na	mg/L	3500-Na.B	-	-	1.5	19	71	70	63
18.	Potassium as K	mg/L	3500-K.B	-	-	0.5	2	48	2.5	7
19.	Chemical Oxygen Demand	mg/L	5220. B	-	-	12	8	10	10	8
20.	Na%		By Calculation	-	-	3.57	21.11	X	37	X
21.	SAR		By Calculation			0.06	0.55	X	1.57	X
22.	RSC		By Calculation			0.02	-0.20	X	-1.91	X

Chief Environmental Scientist

CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

Annexure 2 (20/24)

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

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ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.No	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results				
						S-26 3001	S-27 3002	S-28 3003	S-29 3004	S-30 3005
23.	Boron as B	mg/L	3120. B	0.5	1.0	0.07	0.09	0.11	0.07	0.05
24.	Iron as Fe	mg/L	3120. B	0.3	No relaxation	0.25	0.24	0.74	0.17	0.17
25.	Cadmium as Cd	mg/L	3120. B	0.003	No relaxation	BDL	BDL	BDL	BDL	BDL
26.	Copper as Cu	mg/L	3120. B	0.05	1.5	BDL	BDL	BDL	BDL	BDL
27.	Total Chromium as Cr	mg/L	3120. B	0.05	No relaxation	BDL	BDL	BDL	BDL	BDL
28.	Lead as Pb	mg/L	3120. B	0.01	No relaxation	BDL	BDL	BDL	BDL	BDL
29.	Manganese as Mn	mg/L	3120. B	0.1	0.3	BDL	BDL	BDL	BDL	BDL
30.	Zinc as Zn	mg/L	3120. B	5	15	BDL	BDL	BDL	BDL	BDL
31.	Nickel as Ni	mg/L	3120. B	0.02	No relaxation	BDL	BDL	BDL	BDL	BDL
32.	Total Coliform	MPN/100 mL	9221 B	-	-	<1.8	<1.8	<1.8	<1.8	<1.8
33.	*E. coli*	Presence or Absence/ 100 mL	9221 F	-	-	Absent	Absent	Absent	Absent	Absent

Chief Environmental Scientist

CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

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CPCB & DSIR
Recognized Laboratory

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.N0	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results				
						S-31 3006	S-32 3007	S-33 3008	S-34 3009	S-35 3010
1.	pH	--	4500-H^+B	6.5 to 8.5	No relaxation	6.8	6.6	6.8	7.0	6.7
2.	Turbidity	NTU	2130. B	1	5	0.9	1.1	1	0.7	0.8
3.	Total Dissolved Solids at 180 ºC	mg/L	2540. C	500	2000	605	404	502	272	314
4.	Total Alkalinity as $CaCO_3$	mg/L	2320. B	200	600	200	305	362	179	200
5.	Total Hardness as $CaCO_3$	mg/L	2340. C	200	600	290	270	335	215	185
6.	Chlorides as Cl^-	mg/L	4500-Cl^-.B	250	1000	230	37	40	30	42
7.	Fluoride as F^-	mg/L	4500-F^-.C	1.0	1.5	0.645	0.525	0.49	0.56	0.615
8.	Sulphates as SO_4^{2-}	mg/L	4500-SO_4^{2-}.E	200	400	16	9	6	5	8
9.	Nitrates as NO_3^-	mg/L	4500. NO_3^-.B	45	No relaxation	3	27	39	13	18
10.	Calcium as Ca	mg/L	3500-Ca.B	75	200	44	42	58	32	28
11.	Magnesium as Mg	mg/L	3500-Mg.B	30	100	43	40	46	33	28
12.	Phenolic Compounds as C_6H_5OH	mg/L	5530. D	0.001	0.002	BDL	BDL	BDL	BDL	BDL
13.	Colour	Pt.Co	2120. B	5	15	5	<5	<5	5	5
14.	Mineral Oil	mg/L	IS:3025 (Part 39)	0.5	No relaxation	Absent	Absent	Absent	Absent	Absent
15.	Anionic Detergents	mg/L	IS:13428 2005 K	0.2	1.0	<0.2	<0.2	<0.2	<0.2	<0.2
16.	Hexavalent Chromium as Cr^{+6}	mg/L	3500.Cr^{+6}.B	-	-	BDL	BDL	BDL	BDL	BDL
17.	Sodium as Na	mg/L	3500-Na.B	-	-	42	18	36	9	24
18.	Potassium as K	mg/L	3500-K.B	-	-	6	0.7	1.5	0.6	2
19.	Chemical Oxygen Demand	mg/L	5220. B	-	-	12	8	10	8	8
20.	Na%		By Calculation	-	-	31	18	25	12.	29
21.	SAR		By Calculation			1.08	0.48	0.86	0.27	0.77
22.	RSC		By Calculation			-2.46	-0.39	-0.75	-1.38	-0.42

Chief Environmental Scientist

CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

Annexure 2 (22/24)

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

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ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.No	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results				
						S-31 3006	S-32 3007	S-33 3008	S-34 3009	S-35 3010
23.	Boron as B	mg/L	3120. B	0.5	1.0	0.13	0.06	0.07	0.13	0.07
24.	Iron as Fe	mg/L	3120. B	0.3	No relaxation	0.48	0.23	0.53	0.17	0.25
25.	Cadmium as Cd	mg/L	3120. B	0.003	No relaxation	BDL	BDL	BDL	BDL	BDL
26.	Copper as Cu	mg/L	3120. B	0.05	1.5	BDL	BDL	BDL	BDL	BDL
27.	Total Chromium as Cr	mg/L	3120. B	0.05	No relaxation	BDL	BDL	BDL	BDL	BDL
28.	Lead as Pb	mg/L	3120. B	0.01	No relaxation	BDL	BDL	BDL	BDL	BDL
29.	Manganese as Mn	mg/L	3120. B	0.1	0.3	0.08	BDL	BDL	BDL	BDL
30.	Zinc as Zn	mg/L	3120. B	5	15	BDL	BDL	BDL	BDL	BDL
31.	Nickel as Ni	mg/L	3120. B	0.02	No relaxation	BDL	BDL	BDL	BDL	BDL
32.	Total Coliform	MPN/100 mL	9221B	-	-	<1.8	<1.8	<1.8	<1.8	<1.8
33.	*E. coli*	Presence or Absence/ 100 mL	9221 F	-	-	Absent	Absent	Absent	Absent	Absent

Chief Environmental Scientist

CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

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Annexure 2 (23/24)

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

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Recognized Laboratory

ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.N0	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results				
						S-36 3011	S-37 3012	S-38 3013	S-39 3014	S-40 3015
1.	pH	--	4500-H^+B	6.5 to 8.5	No relaxation	6.8	6.9	7.2	7.0	7.0
2.	Turbidity	NTU	2130. B	1	5	1.3	1.4	1.0	1.2	0.8
3.	Total Dissolved Solids at 180 ºC	mg/L	2540. C	500	2000	860	786	624	986	442
4.	Total Alkalinity as $CaCO_3$	mg/L	2320. B	200	600	336	305	299	326	289
5.	Total Hardness as $CaCO_3$	mg/L	2340. C	200	600	405	400	375	565	215
6.	Chlorides as Cl^-	mg/L	4500-Cl^-.B	250	1000	282	225	142	320	40
7.	Fluoride as F^-	mg/L	4500-F^-.C	1.0	1.5	0.81	0.79	0.68	0.59	0.54
8.	Sulphates as SO_4^{2-}	mg/L	4500-SO_4^{2-}.E	200	400	42	47	30	29	18
9.	Nitrates as NO_3^-	mg/L	4500. NO_3^-.B	45	No relaxation	11	38	24	6	25
10.	Calcium as Ca	mg/L	3500-Ca.B	75	200	62	98	84	140	50
11.	Magnesium as Mg	mg/L	3500-Mg.B	30	100	61	38	25	52	22
12.	Phenolic Compounds as C_6H_5OH	mg/L	5530. D	0.001	0.002	BDL	BDL	BDL	BDL	BDL
13.	Colour	Pt.Co	2120. B	5	15	5	5	5	5	<5
14.	Mineral Oil	mg/L	IS:3025 (Part 39)	0.5	No relaxation	Absent	Absent	Absent	Absent	Absent
15.	Anionic Detergents	mg/L	IS:13428 2005 K	0.2	1.0	<0.2	<0.2	<0.2	<0.2	<0.2
16.	Hexavalent Chromium as Cr^{+6}	mg/L	3500.Cr^{+6}.B	-	-	BDL	BDL	BDL	BDL	BDL
17.	Sodium as Na	mg/L	3500-Na.B	-	-	73	77	62	75	50
18.	Potassium as K	mg/L	3500-K.B	-	-	3.7	2	2.2	4	1.8
19.	Chemical Oxygen Demand	mg/L	5220. B	-	-	12	8	8	12	8
20.	Na%		By Calculation	-	-	36	36	35	29	40
21.	SAR		By Calculation			1.58	1.67	1.53	1.37	1.48
22.	RSC		By Calculation			-2.61	-3.02	-1.35	-5.92	0.43

Chief Environmental Scientist

CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

EPTRI
CPCB & DSIR
Recognized Laboratory

ENVIRONMENT PROTECTION TRAINING AND RESEARCH INSTITUTE (EPTRI)
#91/4, Gachibowli, Hyderabad – 500 032, Telangana, India.
PH: +91–040 –67567519, 67567516, Fax: +91-040-67567535
e-mail: eptri.lab@gmail.com; enquiry@eptri.com

ANALYSIS REPORT

Encl. report no.19/DWC-50 **TEST RESULT**

S.No	Test Parameter(s)	Unit	Test Method	Requirement acceptable Limit as per IS:10500: 2012	Permissible Limit in the absence of Alternative source as per IS 10500:2012	Results				
						S-36 3011	S-37 3012	S-38 3013	S-39 3014	S-40 3015
23.	Boron as B	mg/L	3120. B	0.5	1.0	0.07	0.06	0.13	0.06	0.07
24.	Iron as Fe	mg/L	3120. B	0.3	No relaxation	1.6	0.36	1.26	0.37	0.25
25.	Cadmium as Cd	mg/L	3120. B	0.003	No relaxation	BDL	BDL	BDL	BDL	BDL
26.	Copper as Cu	mg/L	3120. B	0.05	1.5	BDL	BDL	BDL	BDL	BDL
27.	Total Chromium as Cr	mg/L	3120. B	0.05	No relaxation	BDL	BDL	BDL	BDL	BDL
28.	Lead as Pb	mg/L	3120. B	0.01	No relaxation	BDL	BDL	BDL	BDL	BDL
29.	Manganese as Mn	mg/L	3120. B	0.1	0.3	0.2	BDL	0.08	BDL	BDL
30.	Zinc as Zn	mg/L	3120. B	5	15	0.91	BDL	0.40	0.12	BDL
31.	Nickel as Ni	mg/L	3120. B	0.02	No relaxation	BDL	BDL	BDL	BDL	BDL
32.	Total Coliform	MPN/100 mL	9221B	-	-	<1.8	<1.8	<1.8	<1.8	<1.8
33.	*E. coli*	Presence or Absence/ 100 mL	9221 F	-	-	Absent	Absent	Absent	Absent	Absent

Opinion and Interpretation: Not Applicable.
BDL – Below detection limit
Detection limit - Residual Free chlorine – 1mg/L; Cyanide as CN^- - 0.05mg/L; Phenolic Compounds as C_6H_5OH – 0.01 mg/L; Sulfide as S^{2-} - 0.05mg/L; Mercury as Hg – 0.02mg/L; Hexavalent Chromium as Cr^{+6} – 0.05mg/L;

Chief Environmental Scientist
CHIEF ENVIRONMENTAL SCIENTIST
ENVIRONMENT PROTECTION TRAINING
& RESEARCH INSTITUTE
GACHIBOWLI, HYDERABAD

Annexure-3(1/12)

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT
FORM – X
REPORT BY THE BOARD ANALYST
(See Rule 26)

Report No. 2019 – 9432 & 9433 Dt:-05-10-2019

I hereby certify that I, D. Nageswar Rao, State Board Analyst, Zonal Laboratory duly appointed under sub-section (3) of section 53 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) received on the day 27/09/2019 from Dr. S. Purushotham Reddy, AS, ZL-R.C.Puram, a sample of **M/s. Piramal Enterprises Ltd., (Formerly M/s. Piramal Healthcare Ltd., Unit – I, II & III), Sy. No. 71, 77, 78, 79A to 80A & 82A, Digwal (V), Kohir (M), Sangareddy District** collected on 27/09/2019 for analysis. The samples were in a condition fit for analysis reported below:

2019 – 9432 : HTDS Inlet.
2019 – 9433 : HTDS Outlet

I further certify that I have analyzed the aforementioned sample on 27/09/2019 to 05/10/2019 and declare the result of the analysis to be as follows.

S. No.	Parameter	Method No.*	Results	
			9432	9433
1.	pH	**4500 - H^+- B**	6.08	6.23
2.	Total Suspended Solids (TSS)	**2540-D**	876	532
3.	Total Dissolved Solids (TDS)	**2540-C**	36,085	33,284

Note: All results are expressed in mg/L except pH.
* Standard methods for the examination of water & waste water APHA -23rd edition.

The results are related to samples as received.
The condition of the seals, fastening and container on receipt was intact.

BOARD ANALYST

Signed this: 05/10/2019
Address:
D. Nageswar Rao
Senior Environmental Scientist
Zonal Laboratory, R.C.Puram.

To,
Dr. S. Purushotham Reddy, AS,
ZL-R.C.Puram.

Annexure - 3(2/12)

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT
FORM – X
REPORT BY THE BOARD ANALYST
(See Rule 26)

Report No.2019 – 9434 & 9435 Dt:-05-10-2019

I hereby certify that I, D. Nageswar Rao, State Board Analyst, Zonal Laboratory duly appointed under sub-section (3) of section 53 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) received on the day 27/09/2019 from Dr. S. Purushotham Reddy, AS, ZL-R.C.Puram, a sample of **M/s. Piramal Enterprises Ltd., (Formerly M/s. Piramal Healthcare Ltd., Unit – I, II & III), Sy. No. 71, 77, 78, 79A to 80A & 82A, Digwal (V), Kohir (M), Sangareddy District** collected on 27/09/2019 for analysis. The samples were in a condition fit for analysis reported below:

2019 – 9434 : Stripper Condensate
2019 – 9435 : MEE Condensate

I further certify that I have analyzed the aforementioned sample on 27/09/2019 to 05/10/2019 and declare the result of the analysis to be as follows.

S. No.	Parameter	Method No.*	Results	
			9434	9435
1.	pH	**4500 - H^+- B**	8.32	7.63
2.	Total Suspended Solids (TSS)	**2540-D**	20	14
3.	Total Dissolved Solids (TDS)	**2540-C**	770	411
4.	Chemical Oxygen Demand (COD)	**5220-B**	1,09,384	2,857
5.	Oil & Grease	**5520 - B,D**	BDL	BDL

Note: All results are expressed in mg/L except pH.

* Standard methods for the examination of water & waste water APHA -23rd edition.

The results are related to samples as received.
The condition of the seals, fastening and container on receipt was intact.

BDL – Below Detectable Limit

BOARD ANALYST

Signed this: 05/10/2019
Address:
D. Nageswar Rao
Senior Environmental Scientist
Zonal Laboratory, R.C.Puram.

To,
Dr. S. Purushotham Reddy, AS,
ZL-R.C.Puram.

Annexure - 3 (3/12)

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT
FORM – X
REPORT BY THE BOARD ANALYST
(See Rule 26)

Report No.2019 – 9436 to 9438 Dt:-05-10-2019

I hereby certify that I, D. Nageswar Rao, State Board Analyst, Zonal Laboratory duly appointed under sub-section (3) of section 53 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) received on the day 27/09/2019 from Dr. S. Purushotham Reddy, AS, ZL-R.C.Puram, a sample of **M/s. Piramal Enterprises Ltd., (Formerly M/s. Piramal Healthcare Ltd., Unit – I, II & III), Sy. No. 71, 77, 78, 79A to 80A & 82A, Digwal (V), Kohir (M), Sangareddy District** collected on 27/09/2019 for analysis. The samples were in a condition fit for analysis reported below:

2019 – 9436 : LTDS – Primary treatment Outlet.
2019 – 9437 : LTDS – Secondary treatment Outlet.
2019 – 9438 : LTDS – Tertiary treatment Outlet.

I further certify that I have analyzed the aforementioned sample on 27/09/2019 to 05/10/2019 and declare the result of the analysis to be as follows.

S. No.	Parameter	Method No.*	Results		
			9436	9437	9438
1.	pH	**4500 - H^+ - B**	6.33	6.54	6.82
2.	Total Suspended Solids (TSS)	**2540-D**	42	27	20
3.	Total Dissolved Solids (TDS)	**2540-C**	1,314	1,146	923
4.	Chemical Oxygen Demand (COD)	**5220-B**	449	167	131
5.	Biological Oxygen Demand (BOD)	**5210-B**	47	24	20
6.	Oil & Grease	**5520 - B,D**	BDL	BDL	BDL

Note: All results are expressed in mg/L except pH.

* Standard methods for the examination of water & waste water APHA -23rd edition.

The results are related to samples as received.
The condition of the seals, fastening and container on receipt was intact.

BDL – Below Detectable Limit

BOARD ANALYST

Signed this: 05/10/2019
Address:
D. Nageswar Rao
Senior Environmental Scientist
Zonal Laboratory, R.C.Puram.

To,
Dr. S. Purushotham Reddy, AS,
ZL-R.C.Puram.

Annexure- 3 (4/12)

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT
FORM – X
REPORT BY THE BOARD ANALYST
(See Rule 26)

Report No.2019 – 9439 Dt:-05-10-2019

I hereby certify that I, D. Nageswar Rao, State Board Analyst, Zonal Laboratory duly appointed under sub-section (3) of section 53 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) received on the day 27/09/2019 from Dr. S. Purushotham Reddy, AS, ZL-R.C.Puram, a sample of **M/s. Piramal Enterprises Ltd., (Formerly M/s. Piramal Healthcare Ltd., Unit – I, II & III), Sy. No. 71, 77, 78, 79A to 80A & 82A, Digwal (V), Kohir (M), Sangareddy District** collected on 27/09/2019 for analysis. The samples were in a condition fit for analysis reported below:

2019 – 9439 : RO–Permeate

I further certify that I have analyzed the aforementioned sample on 27/09/2019 to 05/10/2019 and declare the result of the analysis to be as follows.

S. No.	Parameter	Method No.*	Results
			9439
1.	pH	4500 - H^+- B	7.02
2.	Total Suspended Solids (TSS)	2540-D	BDL
3.	Total Dissolved Solids (TDS)	2540-C	52
4.	Chemical Oxygen Demand (COD)	5220-B	BDL
5.	Biological Oxygen Demand (BOD)	5210-B	BDL
6.	Oil & Grease	5520 - B,D	BDL
7	Total Organic Content (TOC)	-	BDL
8	Ammonical Nitrogen as NH_3-N	4500- NH_3-N	BDL
9	Total Kjeldhal Nitrogen	4500-N_{org} B	BDL
10	Nitrate Nitrogen as NO3-N	4500-B-NO_3^-N	BDL
11	Phosphate	4500-P .C	BDL
12	Sulphates as SO_4^{-2}	4500-SO_4^{-2}	BDL
13	Chlorides as Cl^-	4500-Cl^- B	10
14	Fluoride as F^-	4500-F^-.C	0.15
15	Phenolic Compounds	5530. D	BDL
16	Residual free Chlorine	4500-Cl^-.B	BDL
17	Zinc as Zn	3111. B	BDL
18	Iron as Fe	3111. B	BDL
19	Copper as Cu	3111. B	BDL
20	Total Chromium	3111. D	BDL
21	Hexavalent Chromium as Cr^{6+}	3500. Cr. B	BDL
22	Cyanide as CN^-	4500-CN^-.F	BDL
23	Arsenic as As	3114 - C	BDL
24	Mercury as Hg	3112 - B	BDL

Note: All results are expressed in mg/L except pH.
* Standard methods for the examination of water & waste water APHA -23rd edition.

The results are related to samples as received.
The condition of the seals, fastening and container on receipt was intact.

BDL – Below Detectable Limit

BOARD ANALYST

Signed this: 05/10/2019
Address:
D. Nageswar Rao
Senior Environmental Scientist
Zonal Laboratory, R.C.Puram.

To,
Dr. S. Purushotham Reddy, AS,
ZL-R.C.Puram.

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Annexure - 3 (5/12)

TELANGANA STATE POLLUTION CONTROL BOARD

ZONAL LABORATORY R.C.Puram
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District - 502032

REPORT BY THE STATE BOARD ANALYST
FORM IV
(See rule 14)

Report No. 2019 – 9440 Date: 05/10/2019

I hereby certify that I, D. Nageswar Rao, State Board Analyst duly appointed under sub-section (3) of Section 26 of the Air (as Prevention and Control of Pollution) Act 1981, sample collected on 27/09/2019 and received on the day 27/09/2019 from Dr. S. Purushotham Reddy, AS, ZL-R.C.Puram, a sample of **Stack attached to coal fired boiler of 16 TPH capacity from M/s. Piramal Enterprises Ltd., (Formerly M/s. Piramal Healthcare Ltd., Unit – I, II & III), Sy. No. 71, 77, 78, 79A to 80A & 82A, Digwal (V), Kohir (M), Sangareddy District** for analysis. The sample was in a condition fit for analysis and reported below.

I further certify that I have analyzed the aforementioned sample on 27/09/2019 to 05/10/2019 and declare the results of the analysis to be as follows:

S. No.	Parameter	Method No	Result mg/Nm^3	As per CFO Standard mg/ Nm^3
1.	SPM	IS:11225 (Part–1)-1985	47	115

The condition of the seals, fastening and container on receipt was as follows:

INTACT

Observations of Sampling Incharge:

1) At the time of monitoring, the coal fired boiler was operating at 16 TPH capacity against installed capacity of 16 TPH.
2) The industry provided with bag filters to control dust emissions and is in operation during the monitoring.
3) The height of the Stack is 40 mtrs.

Signed this: 05/10/2019

BOARD ANALYST

Address:
D. Nageswar Rao
Senior Environmental Scientist
TSPCB, Zonal Laboratory, R.C.Puram,
Sangareddy District.

Annexure 24 (8/12)

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT
(AMBIENT AIR)

Sample Nos. 2019 – 9441 & 9442

1) Name & Address of the Industry : **M/s. Piramal Enterprises Ltd., (Formerly M/s. Piramal Healthcare Ltd., Unit – I, II & III), Sy. No. 71, 77, 78, 79A to 80A & 82A, Digwal (V), Kohir (M), Sangareddy District.**

2) Date of Sampling : 27/09/2019

3) Sample Received on : 27/09/2019

4) Report issued on : 05/10/2019

5) Sample Collected by : AS, ZL-R.C.Puram

S. No.	Parameter	Parameters			
		Shift Type	RSPM $\mu g/m^3$	SO_2 $\mu g/m^3$	NO_2 $\mu g/m^3$
1	Ambient Air Quality Monitoring carried out at the periphery of the industry near Guest House (Upwind direction)	10:00 AM to 06:00 PM	59	5	24
2	Ambient Air Quality Monitoring carried out at the periphery of the industry near the Rainwater Collection Pit No. 5 (RWCP) (Downwind direction)	10:15 AM to 06:15 PM	71	6	26
National Ambient Air Quality Standards		-	**100**	**80**	**80**

*Annual Average
BDL – Below Detectable Limit

Observations of Sampling Incharge:

1) During the monitoring the dominant wind speed is low.
2) At the time of monitoring all the units in the industry are in operation.
3) The industry provided with bag filters to control dust emissions and is in operation during the monitoring.
4) Fixed water sprinklers are provided to suppress the dust emissions.

SENIOR ENVIRONMENTAL SCIENTIST

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Annexure-3(7/12)

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT
FORM – X
REPORT BY THE BOARD ANALYST
(See Rule 26)

Report No. 2019 – 9424 to 9427 Dt:-05-10-2019

I hereby certify that I, D. Nageswar Rao, State Board Analyst, Zonal Laboratory duly appointed under sub-section (3) of section 53 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) received on the day 27/09/2019 from Dr. S. Purushotham Reddy, AS, ZL-R.C.Puram, a sample of **M/s. Frigerio Conserva Allana Private Ltd., Unit – I (Meat Division), Sy. No: 325, Algole (V), Zaheerabad Mandal, Sangareddy District** collected on 26/09/2019 for analysis. The samples were in a condition fit for analysis reported below:

2019 – 9424 : Raw Effluent
2019 – 9425 : After Sepcom
2019 – 9426 : After Biological Processes
2019 – 9427 : Activated Carbon filter Outlet

I further certify that I have analyzed the aforementioned sample on 27/09/2019 to 05/10/2019 and declare the result of the analysis to be as follows.

S. No	Parameter	Method No.*	Results			
			9424	9425	9426	9427
1	pH	4500 - H^+- B	6.77	6.4	7.1	6.75
2	Total Suspended Solids (TSS)	2540-D	155	32	27	BDL
3	Total Dissolved Solids (TDS)	2540-C	2,775	2,499	1,102	980
4	Chemical Oxygen Demand (COD)	5220-B	335	302	82	41
5	Biological Oxygen Demand (BOD)	5210-B	109	91	17	8
6	Oil & Grease	5520-B,D	0.4	0.4	BDL	BDL

Note: All results are expressed in mg/L except pH.
* Standard methods for the examination of water & waste water APHA -23rd edition.

The results are related to samples as received.
The condition of the seals, fastening and container on receipt was intact.

BDL – Below Detectable Limit

BOARD ANALYST

Signed this: 05/10/2019
Address:
D. Nageswar Rao
Senior Environmental Scientist
Zonal Laboratory, R.C.Puram.

To,
Dr. S. Purushotham Reddy, AS,
ZL-R.C.Puram,

Annexure - 3 (8/12)

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT
FORM – X
REPORT BY THE BOARD ANALYST
(See Rule 26)

Report No. 2019 – 9428 Dt:-05-10-2019

I hereby certify that I, D. Nageswar Rao, State Board Analyst, Zonal Laboratory duly appointed under sub-section (3) of section 53 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) received on the day 27/09/2019 from Dr. S. Purushotham Reddy, AS, ZL-R.C.Puram, a sample of **M/s. Frigerio Conserva Allana Private Ltd., Unit – I (Meat Division), Sy. No: 325, Algole (V), Zaheerabad Mandal, Sangareddy District** collected on 26/09/2019 for analysis. The samples were in a condition fit for analysis reported below:

2019 – 9428 : MEE Condensate

I further certify that I have analyzed the aforementioned sample on 27/09/2019 to 05/10/2019 and declare the result of the analysis to be as follows.

S. No	Parameter	Method No.*	Results
			9428
1	pH	4500 - H^+- B	8.05
2	Total Suspended Solids (TSS)	2540-D	BDL
3	Total Dissolved Solids (TDS)	2540-C	2,847
4	Chemical Oxygen Demand (COD)	5220-B	249
5	Biological Oxygen Demand (BOD)	5210-B	26

Note: All results are expressed in mg/L except pH.
* Standard methods for the examination of water & waste water APHA -23rd edition.

The results are related to samples as received.
The condition of the seals, fastening and container on receipt was intact.

BDL – Below Detectable Limit

BOARD ANALYST

Signed this: 05/10/2019
Address:
D. Nageswar Rao
Senior Environmental Scientist
Zonal Laboratory, R.C.Puram.

To,
Dr. S. Purushotham Reddy, AS
ZL-R.C.Puram,

Annexure - 3 (9/12)

TELANGANA STATE POLLUTION CONTROL BOARD

ZONAL LABORATORY: R.C.PURAM

25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT

Sample Nos. 2019 – 9431/A

1) Sample Description : **M/s. Frigerio Conserva Allana Private Ltd., Unit – I (Meat Division), Sy. No: 325, Algole (V), Zaheerabad Mandal, Sangareddy District.**

2) Sample Source : Aeration Tank

3) Sample Collected on : 26/09/2019

4) Sample Received on : 27/09/2019

5) Report issued on : 05/10/2019

6) Sample collected by : AS, ZL-R.C.Puram

S. No.	Parameter	Units	Results
1.	Dissolved Oxygen (DO)	mg/L	4.5

Note:
Results are related to sample as received.

SENIOR ENVIRONMENTAL SCIENTIST

Annexure - 3 (10/12)

TELANGANA STATE POLLUTION CONTROL BOARD

ZONAL LABORATORY R.C.Puram
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District - 502032

REPORT BY THE STATE BOARD ANALYST
FORM IV
(See rule 14)

Report No. 2019 – 9431 Date: 05/10/2019

I hereby certify that I, D. Nageswar Rao, State Board Analyst duly appointed under sub-section (3) of Section 26 of the Air (as Prevention and Control of Pollution) Act 1981, sample collected on 26/09/2019 and received on the day 27/09/2019 from Dr. S. Purushotham Reddy, AS, ZL-R.C.Puram, a sample of **Stack attached to mango peels / kernels / coal / rice husk fired boiler of capacity 6 TPH from M/s. Frigerio Conserva Allana Private Ltd., Unit – I (Meat Division), Sy. No: 325, Algole (V), Zaheerabad Mandal, Sangareddy District for analysis**. The sample was in a condition fit for analysis and reported below.

I further certify that I have analyzed the aforementioned sample on 27/09/2019 to 05/10/2019 and declare the results of the analysis to be as follows:

S. No.	Parameter	Method No	Result mg/Nm^3	Standard mg/ Nm^3
1.	SPM	IS:11225 (Part–1)-1985	50	115

The condition of the seals, fastening and container on receipt was as follows:

INTACT

Observations of Sampling Incharge:

1) During the monitoring 6 TPH boiler is in operation.
2) The industry provided with Pulse jet Bag filters to control the flue gas emissions and is in operation during the monitoring.
3) The height of the stack is 33 meters.

Signed this: 05/10/2019

BOARD ANALYST

Address:
D. Nageswar Rao
Senior Environmental Scientist ,
TSPCB, Zonal Laboratory, R.C.Puram,
Sangareddy District.

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Annexure-3 (11/12)

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT
FORM – X
REPORT BY THE BOARD ANALYST
(See Rule 26)

Report No. 2019 – 9443 & 9444 Dt:-05-10-2019

I hereby certify that I, D. Nageswar Rao, State Board Analyst, Zonal Laboratory duly appointed under sub-section (3) of section 53 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) received on the day 27/09/2019 from Smt. N. Karuna, AES, ZL-R.C.Puram, a sample of **M/s. Shree Siddhivinayaka Agro Extractions Pvt Ltd., Sy. No: 74/2, Alipur (V), Zaheerabad Mandal, Sangareddy District** collected on 27/09/2019 for analysis. The samples were in a condition fit for analysis reported below:

2019 – 9443 : Inlet of ETP
2019 – 9444 : Outlet of ETP

I further certify that I have analyzed the aforementioned sample on 27/09/2019 to 05/10/2019 and declare the result of the analysis to be as follows.

S. No	Parameter	Method No.*	Results		As per CFO Limiting Standards
			9443	9444	
1	pH	4500 - H^+- B	7.23	7.19	5.5 to 9.0
2	Total Suspended Solids (TSS)	2540-D	30	18	200
3	Total Dissolved Solids (TDS)	2540-C	1,458	526	2100
4	Chemical Oxygen Demand (COD)	5220-B	198	69	-
5	Biological Oxygen Demand (BOD)	5210-B	27	9	100
6	Oil & Grease	5520-B,D	BDL	BDL	10

Note: All results are expressed in mg/L except pH.
* Standard methods for the examination of water & waste water APHA -23rd edition.

The results are related to samples as received.
The condition of the seals, fastening and container on receipt was intact.

BDL – Below Detectable Limit

Signed this: 05/10/2019

BOARD ANALYST

Address:
D. Nageswar Rao
Senior Environmental Scientist,
Zonal Laboratory, R.C.Puram.

To,
Smt. N. Karuna, AES,
ZL-R.C.Puram.

Annexure-3 (12/12)

TELANGANA STATE POLLUTION CONTROL BOARD

ZONAL LABORATORY R.C.Puram
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District - 502032

REPORT BY THE STATE BOARD ANALYST
FORM IV
(See rule 14)

Report No. 2019 – 9445 Date: 05/10/2019

I hereby certify that I, D. Nageswar Rao, State Board Analyst duly appointed under sub-section (3) of Section 26 of the Air (as Prevention and Control of Pollution) Act 1981, sample collected on 27/09/2019 and received on the day 27/09/2019 from Smt. N. Karuna, AES, ZL-R.C.Puram, a sample of **Stack attached to thermax boiler of capacity 6 TPH from M/s. Shree Siddhivinayaka Agro Extractions Pvt Ltd., Sy. No: 74/2, Alipur (V), Zaheerabad Mandal, Sangareddy District for analysis**. The sample was in a condition fit for analysis and reported below:

I further certify that I have analyzed the aforementioned sample on 27/09/2019 to 05/10/2019 and declare the results of the analysis to be as follows:

S. No.	Parameter	Method No	Result mg/Nm^3	As per CFO Standard mg/ Nm^3
1.	SPM	IS:11225 (Part–1)-1985	56	115

The condition of the seals, fastening and container on receipt was as follows:

INTACT

Observations of Sampling Incharge:

1) During the monitoring the industry is operating the boiler with capacity of 6 TPH.
2) The industry is provided with MDC & Venturi scrubber to control dust emissions. It is in operation during the monitoring.
3) The Height of the Stack is 30 meters.

Signed this: 05/10/2019

BOARD ANALYST

Address:
D. Nageswar Rao
Senior Environmental Scientist,
TSPCB, Zonal Laboratory, R.C.Puram,
Sangareddy District.

Annexure - 4.

PROF. JAYASHANKAR TELANGANA STATE AGRICULTURAL UNIVERSITY
STCR, RTL & CMS SCHEMES, ARI, RAJENDRANAGAR, HYDERABAD – 30.

SOIL ANALYSIS REPORT

Name : M/S Frigerio Conserva Allana Private limited Date:11-09-2019

Sample No.	Name	pH	EC (dS/m)	N (kg/ha)	P_2O_5 (kg/ha)	K_2O (kg/ha)
1.	ETP Water Land in Factory	6. 68	0.735	324	184	963
2.	Non ETP Water Land	7. 16	0.259	138	128	410
3.	Outside annex land with crops	6. 36	0.095	188	69	233
4.	Outside annex land without crops	6. 28	0.225	318	79	881

Sample 1 : The soil is neutral and non saline. Also soil is high in available nitrogen, phosphorus and potassium. This land is suitable for raising of all most all crops with management practices like application of organic manures.

Sample 2 : The soil is neutral and non saline. Also soil is low in available nitrogen, high in available phosphorus and potassium. This land is suitable for raising of all most all crops.

Sample 3 : The soil is slightly acidic and non saline. Also soil is low in available nitrogen, high in available phosphorus and medium in available potassium. This land is suitable for raising of all most all crops with some management practices like rising of green manure crops and its incorporation, application of vermicompost etc.

Sample 4 : The soil is slightly acidic and non saline. Also soil is high in available nitrogen, available phosphorus and available potassium. This land is suitable for raising of all most all crops with some management practices like application of lime, rising of green manure crops and its incorporation, application of vermicompost etc.

A. Madhavi

PRINCIPAL SCIENTIST (SS) & HEAD
AICRP on STCR
Agricultural Research Institute
Prof. Jayashankar Telangana State Agril. University
Rajendranagar, Hyderabad - 500030. Telangana State

Soil Testing Laboratory, Department of Agriculture, Government of Telangana State
Soil Health Card

Soil Testing Report and Recommended Manures & Fertilizers Date:09-09-2019

	Sample I (436/1), ETP Water Land in Factory		Sample II (437/2), Non ETP water Land		Sample III (438/3), Outside Annex Land with crops		Sample IV (439/4), Outside Annex Land without crops	
Parameters	Result	Remark	Result	Remark	Result	Remark	Result	Remark
Soil texture	SCL	Medium Soil	SCL	Medium Soil	SCL	Medium Soil	SCL	Medium Soil
PH	6.3	Acidic	6.9	Nuteral	5.7	Acidic	5.2	Acidic
EC	0.37	Normal	0.26	Normal	0.13	Normal	0.06	Normal
Organic Carbon	0.9	High	0.4	Less	0.4	Less	0.7	Medium
Phosphorus	62.6	High	48.7	High	7	Less	3.5	Less
Potash	128	Mediun	97	Medium	58	Less	82	Medium
Nitrogen	66	Less	71.7	Less	81.2	Less	101.5	Less

Requirment of Nutrients for Crops

Crops	Jowar	Maize	Bajra	Sugar Cane
Organic Fertilisers	5 Tones/Acre	5 Tones/Acre	5 Tones/Acre	12.5 Tones/Acre
Nitrogen	42 Kg/acre	94 Kg/acre	42 Kg/acre	130 Kg/acre
Phosphorus	17 Kg/Acre	17 Kg/Acre	16 Kg/Acre	52 Kg/Acre
Potash	16 Kg/Acre	20 Kg/Acre	10 Kg/Acre	48 Kg/Acre
Urea	91 Kg/Acre	204 Kg/Acre	91.3 Kg/Acre	283 Kg/Acre
Murate of Potash	27 Kg/Acre	33 Kg/Acre	17 Kg/Acre	80 Kg/Acre
Super Phosphate	106 Kg/Acre	106 Kg/Acre	100 Kg/Acre	325 Kg/Acre
Lime	0	0	0	0

V.R. Reddy, M.Sc. (Agriculture)
Head Corporate QA
Frigorio Conserva Allana Private Limited

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వ్యవసాయ శాఖ - సాయిల్ హెల్త్ కార్డ్

(భూసార పరీక్షా వివరాలు / సిఫారసు చేయబడిన ఎరువులు)

భూసార పరీక్షా కేంద్రము: సంగారెడ్డి నమూనా సంఖ్య 456/L ETP Water land in Feb తేది 07 07 2017

రైతు పేరు Allana (Frigerio Conserva Allana Pvt. Ltd సర్వే నెం.

గ్రామము Algole మండలము Zaheerabad జిల్లా Sangareddy

1. నేల స్వభావము	(ఎర్ర)	తేలిక నేలలు	మధ్యరకపు నేలలు	బరువు నేలలు
2. ఉదజని సూచిక (పి.హెచ్)	(6.3)	ఆమ్లము	తటస్థము	అల్ప / మధ్య / అధిక క్షారము
3. లవణ సూచిక (ఇ.సి.)	(0.34)	సామాన్యం	మొలకెత్తుట కష్టము	పంటలకు హానికరము
4. సేంద్రీయ కర్బనము (ఓ.సి.)	(0.9)	తక్కువ	మధ్యస్థము	ఎక్కువ
5. లభ్య భాస్వరము కి.గ్రా. / ఎ	(62.6)	తక్కువ	మధ్యస్థము	ఎక్కువ
6. లభ్య పొటాష్ కి.గ్రా. / ఎ	(128)	తక్కువ	మధ్యస్థము	ఎక్కువ

వేయవలసిన పైరు జొన్న (Jowar) వంగడము .... ఖరీఫ్ / రబీ

II పైరుకు అవసరమైన పోషక పదార్థములు మోతాదులు / స్థానికంగా లభ్యమగు ఎరువుల మోతాదు

1. సేంద్రీయ ఎరువులు ట/ఎ	5t/acre	1. డి.ఎ.పి. కి.గ్రా. / ఎ	
2. నత్రజని (ఎన్) కి.గ్రా. / ఎ	42 kg/acre	2. సూపర్ ఫాస్ఫేట్ కి.గ్రా. / ఎ	106 kg/acre
3. భాస్వరము (పి) కి.గ్రా. / ఎ	17 kg/acre	3. మ్యూరేట్ ఆఫ్ పొటాష్ కి.గ్రా. / ఎ	27 kg/acre
4. పొటాష్ (కె) కి.గ్రా. / ఎ	16 kg/acre	4. యూరియా కి.గ్రా. / ఎ	91 kg/acre
7. లభ్య నత్రజని కి.గ్రా/ఎ (66) తక్కువ		ఇతర ఎరువులు కి.గ్రా. / ఎ	

లభ్యతను బట్టి వివిధ రసాయనిక ఎరువులను వాడవచ్చును
పైన సూచించిన వాటికి బదులుగా ఇతర రసాయనిక ఎరువులు వాడవలసి వచ్చినపుడు
పాటించవలసిన సమీకరణ.

$$\text{వాడవలసిన ఎరువు మోతాదు కి./ఎ.} = \frac{\text{సూచించిన పోషక పదార్థము మోతాదు కి.గ్రా. ఎకరాకు}}{\text{ఎరువు సంబంధిత సూచించిన పోషక విలువ}} \times 100$$

III ఎ. సబ్బచవుడు / క్షారనేలలు / లక్షణము కలిగి యున్నందున ఎకరానికి .... టన్నుల జిప్సము వేసి చేను బాగు చేయాలి. మరియు సేంద్రీయ ఎరువులు ఎక్కువగా వేయాలి. లేదా పచ్చిరొట్ట పైరు వేసి చేనులో కలియదున్నాలి.

బి. తెల్ల చవుడు / పాల చవుడు / (లవణ పరిమాణము ఎక్కువగా ఉన్న నేలలు) నేలలు-నేలను బాగుగా కలియదున్ని మంచి నీటితో మడులు కట్టి 24 గంటల తర్వాత మురుగు కాలువల ద్వారా నీటిని బయటకు వదల వలెను. ఈ విధముగా 4,5, సార్లు చేసిన యెడల భూమిలో ఉన్న లవణములు నీటిలో కరిగి మామూలు స్థితికి వచ్చును. అంతే గాక పశువుల ఎరువు, పూడిక మట్టి (టాంక్ సిల్ట్)ని వేసినచో నేల స్వభావము చాలా వరకు మారును.

సి. ఆమ్ల నేలలు ఎకరమునకు .... కిలో గ్రాములు సున్నము వేసి భూమిని బాగు చేసుకొనవలెను. ఈ నేలల్లో తగిన పంటలను మాత్రమే వేయవలెను.

భూసంబంధమైన ఇతర వివరాలకు మీ మండల వ్యవసాయాధికారి గారిని సంప్రదించండి.

భారత ప్రభుత్వ సేవార్థము

Assistant Director of Agriculture
SOIL TESTING LABORATORY
SANGAREDDY-502 001

సహాయ వ్యవసాయ సంచాలకులు
భూసార పరీక్షా కేంద్రము
సంగారెడ్డి-502 001

వ్యవసాయ శాఖ - సాయిల్ హెల్త్ కార్డ్

(భూసార పరీక్షా వివరాలు / సిఫారసు చేయబడిన ఎరువులు)

భూసార పరీక్షా కేంద్రము: సంగారెడ్డి నమూనా సంఖ్య 4 [illegible] ETP [illegible] land తేది 09.03.2019

రైతు పేరు Allena (Origeno Conserva Allena Pvt. Ltd) సర్వే నెం. ....

గ్రామము [illegible] మండలము [illegible] జిల్లా Sangareddy

1. నేల స్వభావము	([illegible])	తేలిక నేలలు	మధ్యరకపు నేలలు	బరువు నేలలు	
2. ఉదజని సూచిక (పి.హెచ్)	(6.9)	ఆమ్లము	తటస్థము	అల్ప / మధ్య / అధిక క్షారము	
3. లవణ సూచిక (ఇ.సి.)	(0.22)	సాధారణం	మొలకెత్తుట కష్టము	పంటలకు హానికరము	
4. సేంద్రియ కర్బనము (ఓ.సి.)	(0.4)	తక్కువ	మధ్యస్థము	ఎక్కువ	
5. లభ్య భాస్వరము కి.గ్రా. / ఎ	([illegible])	తక్కువ	మధ్యస్థము	ఎక్కువ	
6. లభ్య పొటాష్ కి.గ్రా. / ఎ	([illegible])	తక్కువ	మధ్యస్థము	ఎక్కువ	

వేయవలసిన పైరు [illegible] సంగరము .... ఖరీఫ్ / రబీ

II పైరుకు అవసరమైన పోషక పదార్థముల మోతాదులు స్థూలంగా లభ్యమగు ఎరువుల మోతాదు

1. సేంద్రియ ఎరువులు టన్/ఎ	[illegible]	1. డి.ఎ.పి. కి.గ్రా. / ఎ	....
2. నత్రజని (ఎన్) కి.గ్రా. / ఎ	94 kg/acre	2. సూపర్ ఫాస్ఫేట్ కి.గ్రా. / ఎ	100 kg/acre
3. భాస్వరము (పి) కి.గ్రా. / ఎ	[illegible] kg/acre	3. మ్యూరేట్ ఆఫ్ పొటాష్ కి.గ్రా. / ఎ	55 kg/acre
4. పొటాష్ (కె) కి.గ్రా. / ఎ	[illegible] kg/acre	4. యూరియా కి.గ్రా. / ఎ	204 kg/acre
		ఇతర ఎరువులు కి.గ్రా. / ఎ	....

[illegible] తక్కువ

లభ్యతను బట్టి వివిధ రసాయనిక ఎరువులను వాడవచ్చును

పైన సూచించిన వాటికి బదులుగా ఇతర రసాయనిక ఎరువులు వాడవలసి వచ్చినపుడు పాటించవలసిన సమీకరణ.

$$\text{వాడవలసిన ఎరువు మోతాదు కి./ఎ.} = \frac{\text{సూచించిన పోషక పదార్థము మోతాదు కి.గ్రా. ఎకరాకు}}{\text{ఎరువు సంచిమీద సూచించిన పోషక విలువ}} \times 100$$

III ఎ. సల్లచవుడు / క్షారనేలలు / లక్షణము కలిగి యున్నందున ఎకరానికి .... టన్నుల జిప్సము వేసి చేను బాగు చేయాలి. మరియు సేంద్రీయ ఎరువులు ఎక్కువగా వేయాలి. లేదా పచ్చిరొట్ట పైరు వేసి చేనులో కలియదున్నాలి.

బి. తెల్ల చవుడు / పాల చవుడు / (లవణ పరిమాణము ఎక్కువగా ఉన్న నేలలు) నేలలు-నేలను బాగుగా కలియదున్ని మంచి నీటితో మడులు కట్టి 24 గంటల తర్వాత మురుగు కాలువల ద్వారా నీటిని బయటకు వదల వలెను. ఈ విధముగా 4,5, సార్లు చేసిన యెడల భూమిలో ఉన్న లవణములు నీటిలో కరిగి మామూలు స్థితికి వచ్చును. అంతే గాక పశువుల ఎరువు, పాటి మట్టి (టాంక్ సిల్ట్)ని వేసినచో నేల స్వభావము చాలా వరకు మారును.

సి. ఆమ్ల నేలలు ఎకరమునకు .... కిలో గ్రాములు సున్నము వేసి భూమిని బాగు చేసుకొనవలెను. ఈ నేలల్లో తగిన పంటలను మాత్రమే వేయవలెను.

భూసంబంధమైన ఇతర వివరాలకు మీ మండల వ్యవసాయాధికారి గారిని సంప్రదించండి.

Assistant Director of Agriculture
Soil Testing Laboratory
Sangareddy-502 001

సహాయ సంచాలకులు వ్యవసాయ
భూసార పరీక్షా కేంద్రము
సంగారెడ్డి -502 001

భారత ప్రభుత్వ సేవార్థము

వ్యవసాయ శాఖ - మొబైల్ సాయిల్ హెల్త్ కార్డ్

(భూసార పరీక్షా వివరాలు / సిఫారసు చేయబడిన ఎరువులు)

భూసార పరీక్షా కేంద్రము: సంగారెడ్డి నమూనా సంఖ్య 4361 తేదీ 09.09.2019

రైతు పేరు Alana Engineering Alana పట్టా పట్టా

గ్రామము Patel మండలము Zaheerabad జిల్లా Sangareddy

1. నేల స్వభావము	(8.1)	తటిక నేలలు	మధ్యరకపు నేలలు	బరువు నేలలు
2. ఉదజని సూచిక (పి.హెచ్)	(5.4)	ఆమ్లము	తటస్థము	అల్ప / మధ్య / అధిక క్షారము
3. లవణ సూచిక (ఇ.సి.)	(0.12)	సాధారణం	మొలకెత్తుట కష్టము	పంటలకు హానికరము
4. సేంద్రీయ కర్బనము (ఓ.సి.)	(0.47)	తక్కువ	మధ్యస్థము	ఎక్కువ
5. లభ్య భాస్వరము కి.గ్రా. / ఎ	(28.0)	తక్కువ	మధ్యస్థము	ఎక్కువ
6. లభ్య పొటాష్ కి.గ్రా. / ఎ	(358)	తక్కువ	మధ్యస్థము	ఎక్కువ

వేయవలసిన పైరు Maize పంగారము ఖరీఫ్ / రబీ

II పైరుకు అవసరమైన పోషక పదార్థములు మోతాదులు స్థానికంగా లభ్యమగు ఎరువుల మోతాదు

1. సేంద్రీయ ఎరువులు ట/ఎ	5 Tons	1. డి.ఎ.పి. కి.గ్రా. / ఎ	
2. నత్రజని (యూ) కి.గ్రా. / ఎ	42.6 kg/acre	2. సూపర్ ఫాస్ఫేట్ కి.గ్రా. / ఎ	100 kg/acre
3. భాస్వరము (పి) కి.గ్రా. / ఎ	16.8 kg/acre	3. మ్యూరేట్ ఆఫ్ పొటాష్ కి.గ్రా. / ఎ	33.6 kg/acre
4. పొటాష్ (కె) కి.గ్రా. / ఎ	10.6 kg/acre	4. యూరియా కి.గ్రా. / ఎ	91.6 kg/acre
5. లభ్యసల్ఫర్ 5 కి.గ్రా/ఎ(కె.ఎ)		ఇతర ఎరువులు కి.గ్రా. / ఎ	

లభ్యతను బట్టి వివిధ రసాయనిక ఎరువులకు వాడవచ్చును
పైన సూచించిన వాటికి బదులుగా ఇతర రసాయనిక ఎరువులు వాడవలసి వచ్చినపుడు
పాటించవలసిన సమీకరణ.

$$\text{వాడవలసిన ఎరువు మోతాదు కి./ఎ.} = \frac{\text{సూచించిన పోషక పదార్థము మోతాదు కి.గ్రా. ఎకరాకు}}{\text{ఎరువు నందలి పై సూచించిన పోషక విలువ}} \times 100$$

III ఎ. నల్లచవుడు / ఖారనేలలు / లక్షణము కలిగి యున్నందున ఎకరానికి ..... టన్నుల జిప్సము వేసి చేను బాగు చేయాలి. మరియు సేంద్రీయ ఎరువులు ఎక్కువగా వేయాలి. లేదా పచ్చరొట్ట పైరు వేసి చేనులో కలియదున్నాలి.

బి. తెల్ల చవుడు / పాల చవుడు / (లవణ పరిమాణము ఎక్కువగా ఉన్న నేలలు) నేలలు-నేలను బాగుగా కలియదున్ని మంచి వీటితో మడులు కట్టి 24 గంటల తర్వాత మురుగు కాలువల ద్వారా వీటిని బయటకు పదల వలెను. ఈ విధముగా 4,5, సార్లు చేసిన యెడల భూమిలో ఉన్న లవణములు నీటిలో కరిగి భూమిలో స్థితికి వచ్చును. అంతే గాక పశువుల ఎరువు, పాలి మల్చ్ (టార్ప్ షీట్)ని వేసిన చోవేల స్వభావము చాలా వరకు మారును.

సి. అన్ని నేలలు ఎకరమునకు ..... కిలో గ్రాములు సున్నము వేసి భూమిని బాగు చేసుకొనవలెను. ఈ నేలల్లో తగిన పంటలను మాత్రమే వేయవలెను.

భూసంబంధమైన ఇతర వివరాలకు మీ మండల వ్యవసాయాధికారి గారిని సంప్రదించండి.

Assistant Director of Agriculture
SOIL TESTING LABORATORY
సంగారెడ్డి-502 001
SANGAREDDY-502 001

భారత ప్రభుత్వ సేవార్థము

వ్యవసాయ శాఖ - సాయిల్ హెల్త్ కార్డ్

(భూసార పరీక్షా వివరాలు / సిఫారసు చేయబడిన ఎరువులు)

భూసార పరీక్షా కేంద్రము: సంగారెడ్డి నమూనా సంఖ్య [illegible] తేది 09.09.2019

రైతు పేరు [illegible] సర్వే నెం. [illegible]

గ్రామము [illegible] మండలము [illegible] జిల్లా Sangareddy

1. నేల స్వభావము	([illegible])	తేలిక నేలలు	మధ్యరకపు నేలలు	బరువు నేలలు	
2. ఉదజని సూచిక (పి.హెచ్)	([illegible])	ఆమ్లము	తటస్థము	అల్ప / మధ్య / అధిక క్షారము	
3. లవణ సూచిక (ఇ.సి.)	([illegible])	సాధారణం	మొలకెత్తుటకు కష్టము	పంటలకు హానికరము	
4. సేంద్రీయ కర్బనము (ఓ.సి.)	([illegible])	తక్కువ	మధ్యస్థము	ఎక్కువ	
5. లభ్య భాస్వరము కి.గ్రా. / ఎ	([illegible])	తక్కువ	మధ్యస్థము	ఎక్కువ	
6. లభ్య పొటాష్ కి.గ్రా. / ఎ	([illegible])	తక్కువ	మధ్యస్థము	ఎక్కువ	

వేయవలసిన పైరు [illegible] సంవత్సరము .... ఖరీఫ్ / రబీ

పైరుకు అవసరమైన పోషక పదార్థముల మోతాదులు స్థూలంగా లభ్యమగు ఎరువుల మోతాదు

1. సేంద్రీయ ఎరువులు టన్ను	[illegible]	1. డి.ఎ.పి. కి.గ్రా. / ఎ	
2. నత్రజని (ఎన్) కి.గ్రా. / ఎ	130 kg/acre	2. సూపర్ ఫాస్ఫేట్ కి.గ్రా. / ఎ	[illegible] kg/acre
3. భాస్వరము (పి) కి.గ్రా. / ఎ	[illegible] kg/acre	3. మ్యూరేట్ ఆఫ్ పొటాష్ కి.గ్రా. / ఎ	8[illegible] kg/acre
4. పొటాష్ (కె) కి.గ్రా. / ఎ	[illegible] kg/acre	4. యూరియా కి.గ్రా. / ఎ	28[illegible] kg/acre
7. [illegible] (1015) [illegible]		ఇతర ఎరువులు కి.గ్రా. / ఎ	

లభ్యతను బట్టి వివిధ రసాయనిక ఎరువులను వాడవచ్చును
పైన సూచించిన వాటికి బదులుగా ఇతర రసాయనిక ఎరువులు వాడవలసి వచ్చినపుడు పాటించవలసిన సమీకరణ.

$$\text{వాడవలసిన ఎరువు మోతాదు కి./ఎ.} = \frac{\text{సూచించిన పోషక పదార్థము మోతాదు కి.గ్రా. ఎకరాకు}}{\text{ఎరువు సంబంధిత సూచించిన పోషక విలువ}} \times 100$$

III ఎ. కల్లచవుడు / క్షారనేలలు / లక్షణము కలిగి యున్నందున ఎకరానికి .... టన్నుల జిప్సము వేసి చేను బాగు చేయాలి. మరియు సేంద్రీయ ఎరువులు ఎక్కువగా వేయాలి. లేదా పచ్చిరొట్ట పైరు వేసి చేనులో కలియదున్నాలి.

బి. తెల్ల చవుడు / పాల చవుడు / (లవణ పరిమాణము ఎక్కువగా ఉన్న నేలలు) నేలను-నేలను బాగుగా కలియదున్ని మంచి నీటితో మడులు కట్టి 24 గంటల తర్వాత మురుగు కాలువల ద్వారా నీటిని బయటకు వదలవలెను. ఈ విధముగా 4,5, సార్లు చేసిన యెడల భూమిలో ఉన్న లవణములు నీటిలో కరిగి మామూలు స్థితికి వచ్చును. అంతే గాక పశువుల ఎరువు, పాటిమట్టి (టాంక్ సిల్ట్)ని వేసినచో నేల స్వభావము చాలా వరకు మారును.

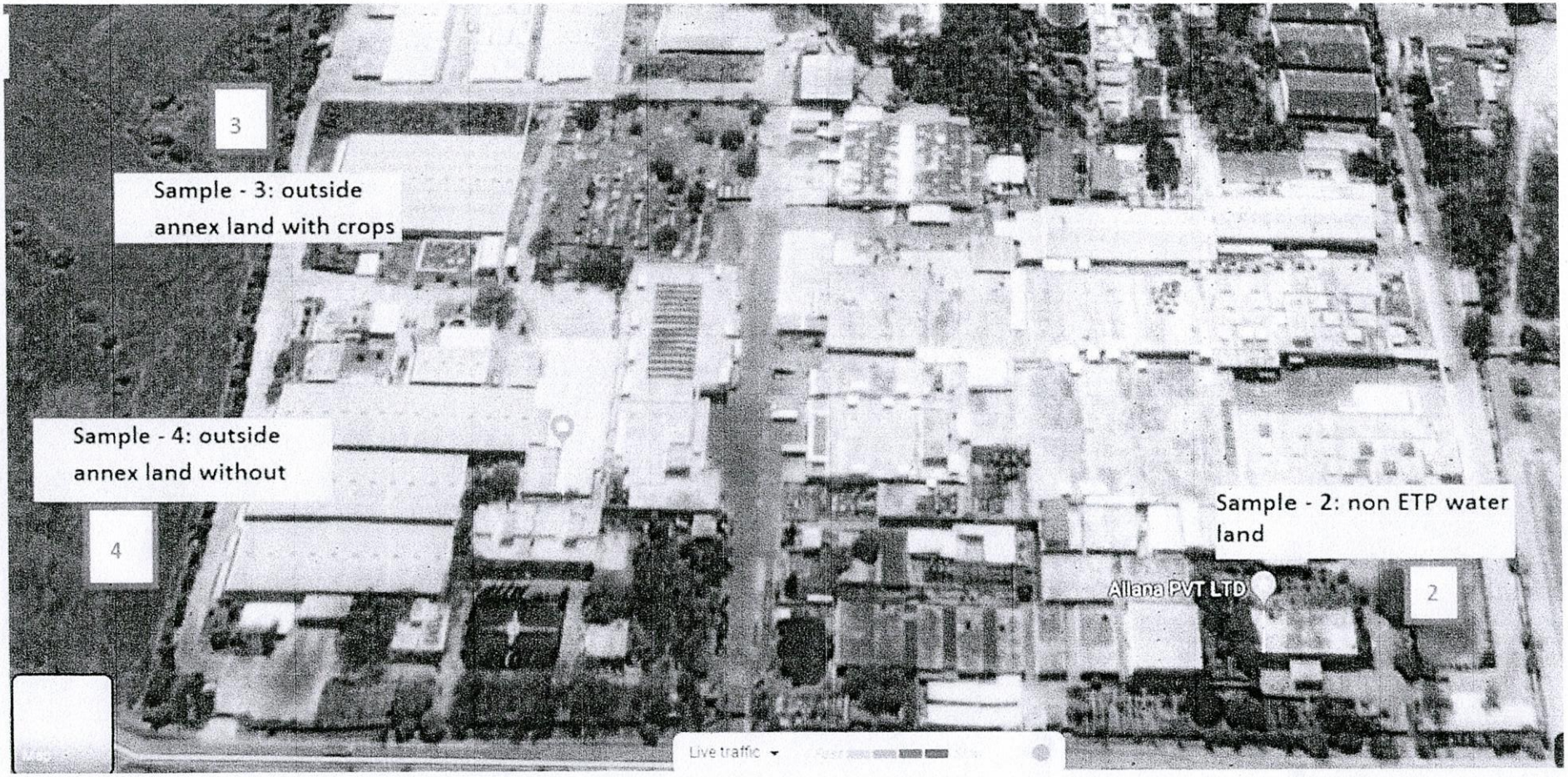
సి. ఆమ్ల నేలలు ఎకరమునకు .... కిలో గ్రాములు సున్నము వేసి భూమిని బాగు చేసుకొనవలెను. ఈ నేలల్లో తగిన పంటలను మాత్రమే వేయవలెను.

భూసంబంధమైన ఇతర వివరాలకు మీ మండల వ్యవసాయాధికారి గారిని సంప్రదించండి.

Assistant Director of Agriculture
సహాయ వ్యవసాయ సంచాలకులు
Soil Testing Laboratory
భూసార పరీక్షా కేంద్రము
Sangareddy-502 001
సంగారెడ్డి-502 001

భారత ప్రభుత్వ సేవార్థము

Frigerio Conserva Allana Private Limited – Soil Sample Locations


3
Sample - 3: outside annex land with crops
Sample - 4: outside annex land without
4
Sample - 2: non ETP water land
Allana PVT LTD
2
Live traffic

107

Annexure-5

Item No. 02 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No. 688/2018

K. Lakshma Reddy Applicant(s)

Versus

M/s Siddi Vinayaka Oil Mill & Ors. Respondent(s)

(Report filed in O.A. No. 688/2019)

Date of hearing: 08.08.2019

CORAM: **HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON**
HON'BLE MR. JUSTICE S.P. WANGDI, JUDICIAL MEMBER
HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER

For Applicant(s): Mr. K. Lakshma Reddy, Applicant in person
For Respondent (s): Mr. Dhananjay Baijal, Advocate

ORDER

1. Issue for consideration is the remedial action against untreated effluents discharged by Frigerio Conserva Allana Ltd, Algole Road, Zahirabad, Piramal Enterprises Ltd. Digwal, Kohir Mandal, and Sri Siddi Vinayaka Oil Mill, Zahirabad, Sangareddy District, Telangana State, adversely affecting the water quality and availability of ground water and drinking water to the inhabitants of the surroundings area.

2. Vide order dated 23.10.2018, a joint report was sought from the Telangana State Pollution Control Board (TSPCB) and the District Magistrate, Sangareddy. The said report confirmed the

causing of the pollution. It was stated that a bank guarantee was sought and since remedial action was not taken, the same was forfeited. The units remained non-compliant.

3. This Tribunal, vide order dated 14.12.2018, held that mere forfeiture of bank guarantee was not enough to enforce the environment norms. The 'Polluter Pays' principle should be applied and prosecution initiated as per mandate of the law. Further report was sought after taking requisite remedial measures.

4. The matter was again considered on 15.03.2019. It was observed from the report of the TSPCB that the industries had high pollution potential. In such circumstances, on the 'Precautionary Principle', the TSPCB must undertake continuous monitoring even after norms are claimed to have been achieved. The material on record justified association of Central Pollution Control Board (CPCB) with the TSPCB in such monitoring. Similarly, in the assessment of damages, it was desirable that the representative of CPCB was associated. The Tribunal directed TSPCB to file further action taken report in the matter.

5. Accordingly, a further report has been submitted on 15.07.2019 finding that the shortcomings in compliance of the norms are continuing but still temporary permission was being given to start the production activities. As regards the compensation, it is stated that compensation may be @ Rs. 1000 per acre per year for dry land and Rs. 1700 per acre per

year for wet land. It is also suggested that health camps be conducted and the industries should be required to comply with the pollution control norms.

6. We find that the report is inadequate to deal with remedial measures. There are three units:-

(i) Frigerio Conserva Allana Ltd, Algole Road, Zahirabad,

(ii) Piramal Enterprises Ltd. Digwal, Kohir Mandal,

(iii) Sri Siddi Vinayaka Oil Mill, Zahirabad.

We may consider the said units individually.

Frigerio Conserva Allana Ltd., Algole Road, Zahirabad

7. As per report dated 01.12.2018, the TSPCB after noting the deficiencies directed on 29.11.2019 as follows:-

"1. The industry shall not operate without consents of the Board.
2. The industry shall comply with the conditions imposed in the CFO&HWA order.
3. The industry shall comply with the directions issued by the Board vide order dated: 03.08.2018 scrupulously.
4. The industry shall provide Screening and Oil & Grease trap to remove the suspended solids before raw effluent collection tanks, so as to prevent sludge accumulation in the raw effluent collection tanks.
5. The industry shall provide Tertiary effluent treatment such as sand / carbon filters, etc.
6. The industry shall remove the sludge regularly collected in the raw effluent collection tanks so that there shall not be any odour nuisance due to accumulation of the sludge.
7. The industry shall upgrade the capacity of MEE to teat all the HTDS effluent generated (as per CFO the permitted quantity is 30 KLD).

8. The industry shall reuse the treated waste water to the maximum extent possible and shall develop the wet land Vetiver System for using the remaining treated waste water.
9. The industry shall remove all the hose pipes observed indiscriminately in the surrounding of ETP area and shall provide permanent pipeline inter connections between the units of ETPs.
10. The industry shall regularly carry out ground water monitoring and shall furnish the reports to the RO on monthly basis.
11. The industry shall provide flow meters to assess quantity of treated effluent used for washings and for sprinkling at bio-filters.
12. The industry shall not discharge any treated / untreated waste water outside the premises.
13. The RO to ensure forfeiture of Bank Guarantee of Rs.20.0 Lakhs.
14. The industry shall submit afresh BG of Rs. 20.0 Lakhs for recouping the amount of BG Forfeited towards compliance of CFO&HWA conditions and above Directions for a period of one year and extended from time to time till further orders of the Board.
15. The industry shall carryout study on ground water quality in the upstream and downstream of the industry by the reputed institutions like NEERI and submit report to the Board within two months."

16. Though in the report dated 22.02.2019 it was stated that the unit has complied with the deficiencies, in the latest report dated 15.07.2019 it is stated that the industry is a source of pollution. Agriculture land in the area was adversely affected by the pollution.

Piramal Enterprises Ltd. Digwal, Kohir Mandal

17. The unit is bulk drug manufacturer which is a red category industry. As per the report dated 01.12.2018, it was found that the unit was not meeting the AAQ and stack monitoring standards. The rain water collection pits were holding high

COD and TDS contents. Directions to remedy the situation were issued. The bank guarantee was forfeited. In the report dated 22.02.2019, again it was stated that on several issues the unit continued to be non-compliant. In the latest report dated 15.07.2019, again it is stated that industries is causing pollution. It was found that industry was causing contamination of water along the local stream and is a source of pollution affecting the agricultural lands. It was, however, observed that after December, 2018 the industry was compliant. The said report is contradictory in this regard.

Sri Siddi Vinayaka Oil Mill, Zahirabad

18. The said unit was found non-compliant in the report dated 30.11.2018 and was causing pollution. Report dated 22.02.2019 as well as latest report are to the effect that the public is facing problem of odour and dust pollution, quality of ground water is deteriorating. The industry be shifted to a new allotted site as early as possible.

19. We have heard the applicant in person and learned counsel for TSPCB.

20. The applicant in person states that Frigerio Conserva Allana Ltd. has been allotted 100 acres of land. The State Government is constructing two bedroom flats adjacent to the unit for weaker sections. Slaughter house operated by the said unit create nuisance. The inspection reports so far conducted have found that the unit is using huge fresh water and discharging polluted effluents outside the premises, lot of

sludge is regularly collected causing odour nuisance. He further states that pollution by all the three units is continuing. The slaughter house operated by the unit needs to be closed. Piramal Enterprises Ltd. and Sri Siddi Vinayaka Oil Mill also needs to be closed and compensation recovered for the pollution caused for the last five years. The compensation should be adequate to recover the cost of restoration and deterrent so that the pollution is not a profitable activity.

21. Having regard to the material on record, we are satisfied that a fresh inspection needs to be carried out by a joint Committee comprising CPCB, IIT Chennai, NEERI Nagpur and State PCB. The CPCB will be nodal agency for compliance and coordination. The Committee may ascertain the present status of the pollution caused in terms of the air, land and water and assess the compensation for the last five years which should be deterrent and adequate to recover the cost of restoration. The Committee may also suggest measures for remediation of the contaminated sites in terms of ground water and soil and whether the units can be allowed to operate, having regard to the adequacy of the pollution control devices and compliance of environmental norms. The report may be furnished to this Tribunal on or before 31.10.2019 by e-mail at judicial-ngt@gov.in. The applicant will be at liberty to participate during the inspection. The State PCB may provide all the requisite data and copies of the inspections conducted and facilitate new inspection. The applicant may furnish his e-mail ID to CPCB for being informed about the date of inspection.

22. The District Magistrate, Sangareddy may conduct health surveys and provide immediate relief to the inhabitants. Cost thereof may be recovered from the industries out of the CSR funds.

23. The applicant or inhabitants of the area may associate to provide necessary assistance to the District Magistrate. The District Magistrate may furnish action taken report before the next date by e-mail at judicial-ngt@gov.in.

24. The applicant is at liberty to move the concerned Court where criminal proceedings are pending for providing necessary assistance to the complainant.

List for further consideration on 13.11.2019.

Adarsh Kumar Goel, CP

S.P. Wangdi, JM

K. Ramakrishnan, JM

Dr. Nagin Nanda, EM

August 08, 2019
Original Application No. 688/2018
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