

***COMPLIANCE REPORT
TO THE CONDITIONS
OF
ENVIRONMENTAL CLEARANCE***

(Order No. 58/SEIAA/KL/7586/2012 Dt. 15-03-2013)

**FOR QUARRY PROJECT AT
KARUKUTTY VILLAGE, KARUKUTTY
PANCHAYATH, ALWAYS TALUK,
ERNAKULAM DISTRICT, KERALA**

By

***M/s PLANTERS AGGREGATES
Palissery, Ezhattumugham P.O., Kerala – 683 577***

(September, 2014)

INTRODUCTION

M/s Planters Aggregates is a stone quarry situated at Survey No. 168 at Karukutty Village, Karukutty Panchayath, Alwaye Taluk, Ernakulam District, Kerala. The quarry project was accorded with environmental clearance by State Environmental Impact Assessment Authority. The compliance report to the specific conditions and general conditions of the environmental clearance for the period of **July 15, 2013 to 24 January 2014** is being submitted here with.

PART - A – SPECIFIC CONDITIONS

➤ . Condition 1)

The storm water drainage channels and drainage line to the existing pond in the site and its exit from the site should be made fully functional.

Compliance

Storm water from entire project area is collected in the existing pond in the site through channels and maintains the channels and outlets fully functional at all time. The photograph showing the rain water collection pond in the project area is attached at Annexure No. 1.

➤ . Condition 2)

The depth of the mining should be restricted to the 30m level as agreed in the proposal

Compliance

In the present quarrying project, the exploration of mineral is from 145 – 30m RL in conceptual phase. Mining depth will maintain as 30 m as agreed in the proposal.

PART - B – GENERAL CONDITIONS

➤ Condition 1)

Rain water harvesting to collect and utilize the entire water falling in land area should be provided.

Compliance

Rainwater harvesting system is smoothly implemented in the project area. rain water from entire project area is collected in the existing pond in the site through channels and maintains the channels and outlets fully functional at all time Rain water is mainly used for irrigation purposes and sprinkler system. Two concrete tanks are also used for the efficient utilization of water management. The photograph showing the rain water collection pond in the project area is attached at Annexure No. 1.

➤ Condition 2)

Environment monitoring cell as agreed under the affidavit filed by the proponent should be formed and made functional

Compliance

An environmental monitoring cell was formed with Mr. Saji Vadakkekara (proprietor of Planters Aggregates as head of the monitoring cell and made functional. The name of the members as follows.

SL NO.	NAME	POST
1	Saji Vadakkekara	Head of monitoring cell (proprietor)
2	Davis George	Head in charge (Environmental)
3	Reji K. Paul	Senior Environmental Officer
4	Kamalkanth	Name of the Asst. officer of Environment, Health and safety at site
5	M/s Environmental	Name of the Environmental

	Engineers & Consultants Pvt. Ltd. A1-198, Janak Puri, New Delhi	consultant
6	Poluchem Laboratory Pvt. Ltd. Pallath Building, North Kalamassery, Ernakulam, Kerala	Address of Environmental Laboratory

➤ . **Condition 3)**

Suitable avenue trees should be planted along either side of the tarred road and open parking areas, if any, inclusive of approach road and internal roads.

Compliance

There is natural vegetation including trees and shrubs in the sides of the tarred road and open parking areas. We will plant suitable trees in site and surrounding area. The photographs showing the natural vegetation is attached at Annexure No. 2.

Condition 4)

The project shall incorporate devices for solar energy generation and utilization wherever possible.

Compliance

Would be complied.

➤ **Condition 5)**

Sprinklers shall be installed and used in the project site to contain dust emissions

Compliance

Would be complied.

➤ **Condition 6)**

The eco-restoration plan submitted with the proposal will fully implemented

Compliance

After the closure of mine, the remaining portion will be suitably planted with green belt and indigenous plant species. The remaining void at lower levels of excavated pit will be utilized as water storage / ground water recharge and will utilized for domestic / agricultural purpose.

➤ **Condition 7)**

Corporate social responsibility agreed upon by the proponent should be implemented

Compliance

As part of the corporate social responsibility, it is proposed to spend a minimum of Rs. 2,19,530/- for various local and charity activities. The documentary evidence showing the Corporate Social Responsibility expenditure incurred in the financial year 2013 to 2014 is attached at Annexure No. 3.

➤ . **Condition 8)**

Barbed metal wire fencing around the mining area shall be provided with a height of not less than 5 ft so that the falling of animals/human/belongings/dumping of garbage's etc. does not happen.

Compliance

Barbed metal wire fencing was successfully installed around the mining area at 5ft height. The photograph of the barbed metal wire fencing is attached at Annexure No. 4.

➤ . **Condition 9)**

Warning alarms indicating the time of blasting (to be done at specific timings) has to be arranged as per stipulations of explosive department.

Compliance

Warning alarms are installed in the project area and it is working smoothly and properly. The blasting time is fixed and is between 6am and 6.00 am and 6:00 pm. A danger board is also installed which gives information about the blast time. The photograph showing the danger area, blasting time sign board etc are provided at Annexure No. 5.

➤ . **Condition 10)**

Access roads to the quarry shall be tarred to contain dust emissions that may arise during transportation of materials

Compliance

At present access road to the quarry is maintained under sprinkler system to control the dust emission during transportation of the material. The access road is newly constructed and it need seasonal consolidation for the tarring or tiles lying. The tarring or tiles lying would be complied. The photograph showing the access road to the quarry is provided at Annexure No. 6.

➤ **Condition 11)**

Overburden material should be managed within the site and the old quarries, if any, should be reclaimed and restored

Compliance

The overburden and top soil is excavated from the quarry and dumped in the old two quarries and will be utilized in spreading over reclaimed areas for plantation. The photographs showing the plantation of local fruit trees carried out at site is attached at Annexure No. 7.

➤ **Condition 12)**

Height of benches should not exceed 5m and width should not be less than 5m.

Compliance

The height of benches of the quarry project is of 5m and width of 5m. The photograph showing the height of benches is attached at Annexure No. 8.

➤ **Condition 13)**

Mats to reduce fly rock blast to a maximum of 15 PPV should be provided.

Compliance

Mats to prevent fly rock during blasting will arranged shortly.

Condition 14)

Mining depth should not exceed beyond 40m, unless otherwise specifies or not below the level of nearest stream bed whichever is less.

Compliance

The exploration of mineral will maintain as 30 m as agreed in the proposal.

Condition 15)

Acoustic enclosures should have been provided to reduce sound amplifications in addition to the provisions of greenbelt and hollow brick envelope for crushers so that the noise level is kept within prescribed standards given by CPCB/KSPCB.

Compliance

Acoustic enclosure is provided to reduce sound amplification. The crusher unit is encircled by green belt. The hollow brick covering in the unit aid to maintain the noise level as per CPCB standards. The photograph showing the crusher unit is attached at Annexure No. 9.

Condition 16)

Assurance in the form of affidavit should be given to SEIAA that eco-restoration including the mine closure plan shall be done at the own cost of the project proponent.

Compliance

Assurance in the form of affidavit is being submitted to SEIAA Kerala that eco-restoration including the mine closure plan shall be done at our expenses. The copy of the affidavit submit is attached at Annexure No. 10.

Condition 17)

Garland drains to be provided in the lower slopes around the core area to channelize storm water.

Compliance

Rainwater harvesting system is smoothly implemented in the project area. rain water from entire project area is collected in the existing pond in the site through channels and maintains the channels and outlets fully functional at all time Rain water is mainly used for irrigation purposes and sprinkler system. Two concrete tanks are also used for the efficient utilization of water management. The photograph showing the rain water collection pond in the project area is attached at Annexure No. 1.

Condition 18)

Debris/ slit traps to be provided to prevent entry of dust and quarry wastes entering the main streams.

Compliance

Storm water from entire project area is collected through channels and directed to the existing pond in the site. During this storage all the Debris/slit in the storm water are sediment in to the bottom of the pond. There is a road to the bottom of the pond and can collect the silt in summer by using excavator. Flooded water from the pond is released only through the top area and the outlet of the outward channel is protecting with steel mesh to trap the floating debris. This arrangement will prevent the passage of waste from the site to the mainstreams. The photograph showing the rain water collection pond in the project area is attached at Annexure No. 1.

Condition 19)

All other statutory clearances should have been obtained as applicable, by the project proponents from the respective competent authorities that for blasting and storage of explosives.

Compliance

All statutory approvals required for the quarrying activity is obtained for the project. The copy of the approvals obtained is provided at Annexure No. 11

Condition 20)

In case of any change(s) in the scope of the project, the project would require a fresh appraisal by this authority

Compliance

Would be complied.

Condition 21)

The authority reserved the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environment (protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.

Compliance

Would be complied.

Condition 22)

The stipulations by Statutory Authorities under different Acts and notifications should be complied with, including the provisions of Water (Prevention and control of pollution) Act, 1974, the Air (Prevention and control of pollution) Act 1981, The Environment (Protection) Act, 1986, the public liability (Insurance) Act, 1991 and EIA notification, 2006.

Compliance

Would be Complied.

Condition 23)

The project proponent should advertise in at least two local newspapers widely circulated in the region. One of which shall be in the vernacular language informing that the project has been accorded environmental clearance and copies of clearance letters are available with the Department of Environment and climate change, Govt. of Kerala and may also be seen on the website of the authority at www.seiaaKerala.org. The advertisement should be made within 10 days from the date of receipt of the clearance letter and a copy of the same should be forwarded to the office of this authority as confirmation.

Compliance

Regarding the accordence of environmental clearance to the quarrying activity was advertised in two local newspapers and the copy of the same was submitted to SEIAA. The copy of newspaper advertisement is provided at Annexure No. 12.

Condition 24)

A copy of the clearance letter shall be sent by the proponent to concerned Grama Panchayat/District Panchayat/Municipality/Corporation/Urban local Body and also to the local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

Compliance

A copy of the environmental clearance letter was submitted to Karukutty Grama Panchayat office on 26/11/2013 an inward no. 7405/13. There is no suggestion/representation received so far from anybody. The environmental clearance order is uploaded in the website of the company and it can be seen in the website www.plantergroup.com.

Condition 25)

The proponent shall submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hand copies as well as by e-mail) and upload the status of compliance of the stipulated EC conditions including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the respective Regional Office of MoEF, Govt. of India and also the Directorate of Environment and Climate Change, Govt. of Kerala.

Compliance

Would be complied.

Condition 26)

The conditions of the environmental clearance should be prominently displayed in a metallic board of 3 ft x 3 ft with green background and yellow letters of Times New Roman font size of not less than 40.

Compliance

The specific conditions of the environmental clearance prominently displayed in a metallic board of 3 ft x 3 ft with green background and yellow letters of Times New Roman font was installed. The photograph showing the sign board containing specific conditions is provided at Annexure No. 13.

Condition 27)

The proponent shall provide affidavit that all the conditions stipulated in the EC shall be scrupulously followed.

Compliance

An affidavit stating that all the conditions stipulated in the Environmental clearance will be scrupulously followed was submitted to Department of Environment and climate change. The copy of affidavit submitted at SEIAA is attached at Annexure No. 10.

ANNEXURE - 1



ANNEXURE – 2



ANNEXURE – 3

മുന്നൂർപ്പിള്ളി ആർട്സ് & സ്പോർട്സ് ക്ലബ്ബ് (MAS)
 മുന്നൂർപ്പിള്ളി, പൂർവ്വമുഖം- 683 577
 Reg. No.....

നമ്പർ **151** സംഭാവന തരീത് **27/08/12**
 പ്രതി/പരിവർത്തി **Plants Aggregate**
Three thousand only - പക്കൽ നിന്നും
 രൂപ തരണപ്രദവും കൈപ്പറ്റിയിരിക്കുന്നു.
 പ്രതിവർത്തി / സമ്പ്രദാനി **3000/-**
3000

ഭരണിമുക്തിദാനം, പാലിശ്ശേരി
 പാലിശ്ശേരി, പാലിശ്ശേരി, പാലിശ്ശേരി
 നമ്പർ **005** തരീത് **22-11-12**
 പക്കൽ **Plants Aggregate**
2000
2000

മുന്നൂർപ്പിള്ളി ആർട്സ് & സ്പോർട്സ് ക്ലബ്ബ് (MAS)
 മുന്നൂർപ്പിള്ളി, പൂർവ്വമുഖം- 683 577
 Reg. No.....

നമ്പർ **100** സംഭാവന തരീത് **18/08/12**
 പ്രതി/പരിവർത്തി **Plants Aggregate**
1500
1500

നമ്പർ **121** സംഭാവന തരീത് **18/08/12**
 പ്രതി/പരിവർത്തി **Plants Aggregate**
1000
1000

ANNEXURE – 3

Emmanuel Orphanage
Reg.No.EP - 508/2009
Azhakkam P.O., Mookkannur (Via), Ernakulam - Dist.
Kerala - 682 577, South India

Rev. Verghese Thekkil
Executive Director
Ph: 94494 - 2819328
Mob: 9447150230, 9281511438
E-mail: emmanuelorphanage@gmail.com
Website: www.emmanuelorphanage.org

To

Received with thanks from Mr. Soji Vaidakkukara, Planters Aggregates,
Ezhattumangalam P.O., Palissery, as rice to 165 inmates of Emmanuel Orphanage
Azhakam, which costs Rs. 2,12,036/- during the period of 1-4-2013 to 31-3-2014.

Verghese Thekkil
Rev. Verghese Thekkil
Executive Director
EMMANUEL ORPHANAGE

EMMANUEL ORPHANAGE
AZHAKKAM P.O. - 682 577

Emmanuel Orphanage A/c No. 8398, South Indian Bank, Angamaly Branch
Rev. Verghese Thekkil A/c No. 83, 8398 South Indian Bank, Angamaly Branch

"ഇന്ത്യയിലെ ഏറ്റവും മികച്ച ഓർഫനേജ്" 2014

ANNEXURE – 4



ANNEXURE – 5



ANNEXURE – 6



ANNEXURE – 7



ANNEXURE – 8



ANNEXURE – 9



ANNEXURE - 10



കേരളം KERALA **AFFIDAVIT** X 340969

I, Saji Vadakkakara authorised signatory of Planters Aggregates having its correspondence office at Palisseri, Ethottumugham, Ankanam, Ernakulam, Kerala, 683577 Pin- Do hereby affirm and confirm as follows.

1. That The Planters Aggregates, Proposed quarry project in Survey No 168 at Karukutty Village & Panchayath and Alwaye Taluk, Ernakulam District, Kerala.
2. That the EC proceedings number and date are
58/SEIAA/KL/7586/2012 dt.15-03-2013
3. That all conditions stipulated in the environment
Clearance would be scrupulously followed.



90
100

Saji Vadakkakara
Vadakkakara house
Kolamch...

DEPONENT



Saji Vadakkakara
KUMARI JAYA.N.
ADVOCATE & NOTARY
Reg. No. 105 / 97 / EKM.
KOLENCHERY - 682 311
KERALA - INDIA

I solemnly affirm and swear that the above statements are true to the best of my knowledge and belief and nothing has been cancelled therein.

15/4/13 day of April 2013

ANNEXURE – 11

[illegible][illegible][illegible]

ANNEXURE - 11



POLUCHEM LABORATORIES (P) LTD.
ANALYTICAL CHEMISTS, ETP CONSULTANTS & CHEMICAL ENGINEERS
PALLATH BUILDING, N. KALAMASSETTY P.O., ERNAKULAM - 683 104
PHONE: 2484 - 326174, 2544030. E-mail: poluchem@gmail.com

'A' GRADE LABORATORY APPROVED BY KERALA STATE POLLUTION CONTROL BOARD

TEST REPORT

Client Name & Address	Certificate No.	PLSD/RT/4154/2013
M/s Planters Aggregates, Karukatty, Aluva, Ernakulam	Date of issue	25/11/2013
	Date of monitoring	19/11/2013 11:30 Hrs to 20/11/2013 10:30 Hrs
	Monitoring Location	M/s Planters Aggregates, Survey No. 168, Block-I, Karukatty Village, Karukatty Panchayath, Aluva Taluk, Ernakulam District, Kerala.
	Sample Description	Ambient Sound Level (Leq)

Monitoring Location	Time	Results
Near east side boundary	7:30 Hrs	51.8 dB (A)
	11:30 Hrs	54.2 dB (A)
	12:30 Hrs	54.8 dB (A)
	13:30 Hrs	54.2 dB (A)
	14:30 Hrs	55.4 dB (A)
	15:30 Hrs	54.0 dB (A)
	16:30 Hrs	53.7 dB (A)
	17:30 Hrs	53.2 dB (A)
	18:30 Hrs	52.8 dB (A)
	19:30 Hrs	51.9 dB (A)
	20:30 Hrs	48.8 dB (A)
	21:30 Hrs	45.7 dB (A)
	22:30 Hrs	48.4 dB (A)
	23:30 Hrs	41.3 dB (A)
	00:30 Hrs	39.1 dB (A)
	01:30 Hrs	38.7 dB (A)
	02:30 Hrs	37.9 dB (A)
	03:30 Hrs	37.1 dB (A)
	04:30 Hrs	36.8 dB (A)
	05:30 Hrs	38.2 dB (A)
	06:30 Hrs	40.4 dB (A)
	07:30 Hrs	44.5 dB (A)
	08:30 Hrs	48.1 dB (A)
	09:30 Hrs	51.9 dB (A)
Leq (Day time)		51.9 dB (A)
Leq (Night time)		38.2 dB (A)

For Poluchem Laboratories (P) Ltd.

Authorized Signatory

Analysis of Ambient air, Stack emissions, Noise, Light, Water, Waste water / Effluent, Soil, Tea, Spices, Oil, Fertilisers, Basic Chemicals etc; Pesticide Residue, Heavy Metals, Microbiology



POLUCHEM LABORATORIES (P) LTD.
ANALYTICAL CHEMISTS, ETP CONSULTANTS & CHEMICAL ENGINEERS
PALLATH BUILDING, N. KALAMASSETTY P.O., ERNAKULAM - 683 104
PHONE: 2484 - 326174, 2544030. E-mail: poluchem@gmail.com

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TEST REPORT

Page 01 of 02

Ref.No: PL/RT/DW/4155/2013

Date of Issue: 25/11/2013

Name & address of customer

M/s Planters Aggregates,
Karukatty, Aluva, Ernakulam

Project Site

M/s Planters Aggregates,
Survey No. 168, Block-I,
Karukatty Village,
Karukatty Panchayath, Aluva Taluk,
Ernakulam District, Kerala.

Sample description

Drinking water

Location of sampling

Borewell water

Date of sample collected

19/11/2013

Date of analysis started

20/11/2013

Date of completion of analysis

25/11/2013

Parameters tested	Test method	Results	Acceptable limit As Per IS 10500-2012
Color	IS 3025 (P) 04 - 1983	3 Hazen Unit	5 Hazen Unit
Odour	IS 3025 (P) 05 - 1983	Agreeable	Agreeable
Turbidity	IS 3025 (P) 10 - 1984	BDL	1 NTU
pH	IS 3025 (P) 11 - 1983	6.56	6.5 - 8.5
Total Dissolved Solids	IS 3025 (P) 15 - 1984	130 mg/l	500 mg/l
Total Hardness as CaCO ₃	IS 3025 (P) 21 - 1983	70.12 mg/l	200 mg/l
Total Alkalinity as CaCO ₃	IS 3025 (P) 23 - 1986	43 mg/l	200 mg/l
Residual Free Chlorine	IS 3025 (P) 26 - 1986	BDL	Min 0.2 mg/l
Chloride as Cl	IS 3025 (P) 32 - 1988	14.23 mg/l	250 mg/l
Calcium as Ca	IS 3025 (P) 40 - 1991	11.11 mg/l	75 mg/l
Magnesium as Mg	IS 3025 (P) 46 - 1994	7.93 mg/l	30 mg/l
Iron as Fe	IS 3025 (P) 53 - 2003	BDL	0.3 mg/l
Sulphate as SO ₄	IS 3025 (P) 31 - 1988	22.2 mg/l	200 mg/l
Fluoride as F	IS 3025 (P) 60 - 2008	BDL	1 mg/l

Note: BDL - Below Detection Level

For Poluchem Laboratories (P) Ltd.

Authorized Signatory

Quality Manager
poluchem Laboratories (P) Ltd.

Analysis of Ambient air, Stack emission, Noise, Light, Water, Waste water / Effluent, Soil, Tea, Spices, Oil, Fertilisers, Basic Chemicals etc; Pesticide Residue, Heavy Metals, Microbiology

ANNEXURE - 11



POLUCHEM LABORATORIES (P) LTD.
ANALYTICAL CHEMISTS, ETP CONSULTANTS & CHEMICAL ENGINEERS
PULATHI BUILDING, K. KALAMASSERY PO., CHENGAMALAM - 683 104
PHONE: (0484) 3562149, 3544010; E-mail: poluchem@rediffmail.com

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Page 02 of 02

Continuation of Test Certificate No. 4135/2013

Parameters tested	Test method	Results	Acceptable limit As Per IS 10500:2012
Selenium as Se	APHA 3111B	BDL	0.01 mg/l
Arsenic as As	APHA 3111B	BDL	0.01 mg/l
Copper as Cu	APHA 3111B	BDL	0.05 mg/l
Manganese as Mn	APHA 3111B	BDL	0.1 mg/l
Cadmium as Cd	APHA 3111B	BDL	0.003 mg/l
Chromium as Cr	APHA 3111B	BDL	0.05 mg/l
Zinc as Zn	APHA 3111B	BDL	5 mg/l
Mercury as Hg	APHA 3111B	BDL	0.001 mg/l
Cyanide as CN	APHA 4500 E	BDL	0.05 mg/l
Lead as Pb	APHA 3111 B	BDL	0.01 mg/l
Aluminium as Al	APHA 5590 D	BDL	0.03 mg/l
Boron as B	APHA 4500 B	BDL	0.5 mg/l

Note: BDL - Below Detection Level

MICROBIOLOGICAL TESTS

Parameters	Unit	Results	Acceptable Limit As per IS - 10500:2012
Coliforms/100ml	Index/100ml	Present	Shall not detectable in any 100 ml sample
E.coli	Index/100ml	Absent	Shall not detectable in any 100 ml sample

For Poluchem Laboratories (P) Ltd.

SURESHA RAMESH
Quality Manager
Poluchem Laboratories (P) Ltd.

Authorised Signatory

Analysis of Ambient air, Stack emission, Noise, Light, Water, Waste water / Effluent, Soil
Tea, Spices, Oil, Fertilisers, Basic Chemicals etc; Pesticide Residue, Heavy Metals, Microbiology



POLUCHEM LABORATORIES (P) LTD.
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PHONE: (0484) 3562149, 3544010; E-mail: poluchem@rediffmail.com

'A' GRADE LABORATORY APPROVED BY KERALA STATE POLLUTION CONTROL BOARD

TEST REPORT

Page 01 of 02

Ref.No. PL/RT/DW/4135/2013

Name & address of customer

Project Site

Date of Issue: 25/11/2013

M/s Planters Aggregates,
Kandatty, Aluva, Ernakulam.
M/s. Planters Aggregates,
Survey No.108, Block-1,
Kandatty Village,
Kandatty Panchayath, Aluva Taluk,
Ernakulam District, Kerala.

Sample description
Location of sampling
Date of sample collected
Date of analysis started
Date of completion of analysis

Drinking water
Borewell water
19/11/2013
20/11/2013
25/11/2013

Parameters tested	Test method	Results	Acceptable limit As Per IS 10500:2012
Color	IS 3025 (P) 04 - 1983	3 Hazen Unit	5 Hazen Unit
Odour	IS 3025 (P) 05 - 1983	Agreeable	Agreeable
Turbidity	IS 3025 (P) 10 - 1984	BDL	1 NTU
pH	IS 3025 (P) 11 - 1983	6.56	6.5 - 8.5
Total Dissolved Solids	IS 3025 (P) 15 - 1984	139 mg/l	500 mg/l
Total Hardness as CaCO ₃	IS 3025 (P) 21 - 1983	70.12 mg/l	200 mg/l
Total Alkalinity as CaCO ₃	IS 3025 (P) 23 - 1986	43 mg/l	200 mg/l
Residual Free Chlorine	IS 3025 (P) 26 - 1986	BDL	Min 0.2 mg/l
Chloride as Cl	IS 3025 (P) 32 - 1988	14.23 mg/l	250 mg/l
Calcium as Ca	IS 3025 (P) 40 - 1991	11.11 mg/l	75 mg/l
Magnesium as Mg	IS 3025 (P) 46 - 1994	7.93 mg/l	30 mg/l
Iron as Fe	IS 3025 (P) 57 - 2003	BDL	0.3 mg/l
Sulphate as SO ₄	IS 3025 (P) 31 - 1988	22.2 mg/l	200 mg/l
Fluoride as F	IS 3025 (P) 60 - 2008	BDL	1 mg/l

Note: BDL - Below Detection Level

For Poluchem Laboratories (P) Ltd.

SURESHA RAMESH
Quality Manager
Poluchem Laboratories (P) Ltd.

Authorised Signatory

Analysis of Ambient air, Stack emission, Noise, Light, Water, Waste water / Effluent, Soil
Tea, Spices, Oil, Fertilisers, Basic Chemicals etc; Pesticide Residue, Heavy Metals, Microbiology



POLUCHEM LABORATORIES (P) LTD.
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PHONE: (0484) 3562149, 3544010; E-mail: poluchem@rediffmail.com

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Page 02 of 02

Continuation of Test Certificate No. 4135/2013

Parameters tested	Test method	Results	Acceptable limit As Per IS 10500:2012
Selenium as Se	APHA 3111B	BDL	0.01 mg/l
Arsenic as As	APHA 3111B	BDL	0.01 mg/l
Copper as Cu	APHA 3111B	BDL	0.05 mg/l
Manganese as Mn	APHA 3111B	BDL	0.1 mg/l
Cadmium as Cd	APHA 3111B	BDL	0.003 mg/l
Chromium as Cr	APHA 3111B	BDL	0.05 mg/l
Zinc as Zn	APHA 3111B	BDL	5 mg/l
Mercury as Hg	APHA 3111B	BDL	0.001 mg/l
Cyanide as CN	APHA 4500 E	BDL	0.05 mg/l
Lead as Pb	APHA 3111 B	BDL	0.01 mg/l
Aluminium as Al	APHA 5590 D	BDL	0.03 mg/l
Boron as B	APHA 4500 B	BDL	0.5 mg/l

Note: BDL - Below Detection Level

MICROBIOLOGICAL TESTS

Parameters	Unit	Results	Acceptable Limit As per IS - 10500:2012
Coliforms/100ml	Index/100ml	Present	Shall not detectable in any 100 ml sample
E.coli	Index/100ml	Absent	Shall not detectable in any 100 ml sample

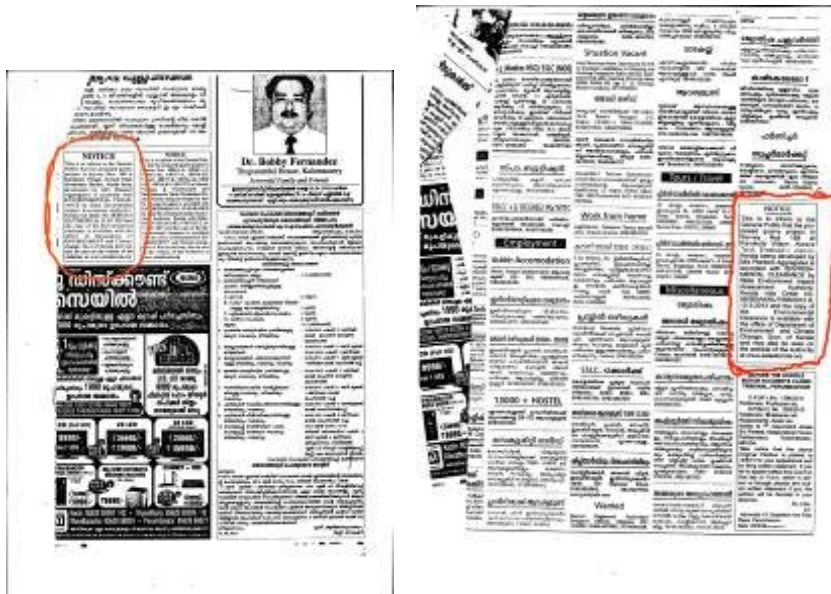
For Poluchem Laboratories (P) Ltd.

SURESHA RAMESH
Quality Manager
Poluchem Laboratories (P) Ltd.

Authorised Signatory

Analysis of Ambient air, Stack emission, Noise, Light, Water, Waste water / Effluent, Soil
Tea, Spices, Oil, Fertilisers, Basic Chemicals etc; Pesticide Residue, Heavy Metals, Microbiology

ANNEXURE – 12



ANNEXURE – 13

