October 2017 – March 2018

M/s TRAVENCORE BLUE METAL INDUSTRIES (P) LTD

Thíruvananthapuram Dístríct Kerala

M/s Travancore Blue Metal Industries (P) Ltd.				
Compliance report				

COMPLIANCE REPORT

TO

THE CONDITIONS

OF

ENVIRONMENTAL CLEARANCE ORDER

NO: 152/SEIAA/KL/3072/2013

Dated: 31-03-2017

BY

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY (SEIAA) FOR

BUILDING STONE QUARRY
(MINOR MINERAL MINING) PROJECT

AT

SURVEY NOS. 229/1, 229/13, 229/9, AND OTHERS IN VILLAGE & PANCHAYAT - ARUVIKARA, TALUK - NEDUMANGAD, DISTRICT - THIRUVANANTHAPURAM, KERALA

BY

M/s TRAVANCORE BLUE METAL INDUSTRIES (P) LTD THIRUVANATHAPURAM DISTRICT KERALA

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INTRODUCTION

The quarry project of **M/s Travancore Blue Metal Industries (P) Ltd.** is situated at survey No. 229/1, 229/13, 229/9, and others in Village & Panchayat - Aruvikara, Taluk - Nedumangad, District - Thiruvananthapuram, Kerala.

The quarry project was accorded with the Environmental Clearance (EC) by State Environmental Impact Assessment Authority on 31-03-2017. As part of general condition No.37 of Environmental Clearance order, half yearly compliance report needs to be submitted by the project proponent. The compliance report of second half to the specific conditions and general conditions of the Environmental Clearance order for the period of October 2017 – March 2018 is being submitted.

COMPLIANCE REPORT

(SPECIFIC CONDITIONS)

PART A

Compliance report

PART - A - SPECIFIC CONDITIONS

01	Steep cliff like feature may be demarcated and fenced as danger	complied
	zones with sign boards.	

Compliance:

The project proponent has demarcated by fencing on the top of steep cliff like feature in the mining area. This will be maintained in the project area. Sign board is also installed to know it is a danger zone.

02	Storm water drainage from the upper part must be channelized	complied
	properly and let out through well defined channels. Catch water	
	drain should be provided and water must be clarified to avoid silt to reach the river. Avoid letting out water be side of the approach road.	

Compliance:

As part of storm water management, the project proponent has been constructing well defined drainages to channelize all surface runoff in to the rain water harvesting pond in the project site. The de-siltation chamber is being provided to remove sediments from the storm water. At present the project proponent has been storing maximum possible rain water in to the constructed pond.

03	The rain water structure should be provided.	Complied	
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Compliance:

To collect rain water from the entire project land, the proponent has developed two rain water harvesting pond in the project site The storm water flow is leading to the pond through constructed and natural drainages. The stored rain water is using for irrigation purposes, watering of plants, wetting of roads, and for dust suppression system (mainly sprinklers system). The photograph is showing the rain water collection pond in the project area in **Plate No. 1**.

COMPLIANCE REPORT

(GENERAL CONDITIONS)

PART B

Compliance report

PART - B - GENERAL CONDITIONS

01	Rain Water Harvesting capacity should be installed as per the prevailing	Complied
	provisions of KMBR / KPBR, unless otherwise specified.	

Compliance:

Even though it is not specified in KMBR/KPBR to collect rain water in mining area, the proponent has developed two rain water harvesting pond in the project site to collect rain water falling in the entire mining area. The RWH pond is situated at the lower parts of the quarry area. The collected rain water is used for irrigation purposes, watering of plants, wetting of roads, supply to public and for dust suppression system (mainly sprinklers system). The photograph showing the rain water collection pond in the project area is attached in **Plate No.1**.

02	Environment Monitoring Cell (EMC) as agreed under the affidavit file	Complied
	by the proponent should be formed and made functional.	

Compliance:

To monitor and evaluate the works done under the conditions stipulated in the EC order, the project proponent has formed an Environmental Monitoring Cell (EMC) with Mr. Biju varghese as head of the monitoring cell. The EMC meeting will arrange regularly for a sustainable environment. The details of the EMC members is given in **Table No. 1**

Table 1 - Environmental Monitoring Cell (EMC)

SI. No.	Post	Name
1.	Head of monitoring cell (proprietor)	Biju varghese
2.	Member	Saifudheen P Y
3.	Member	Vijayakumar K

Compliance report

4.	Member	Environmental Engineers and
		consultants Pvt. Ltd.

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

Compliance:

Green belt is an important component in the mining sector. To reduce air and noise pollution, the project proponent has planted avenue trees along either side of the road. There is also natural vegetation including trees, shrubs and climbers are presents in the sides of road and parking area. The project could plant more suitable avenue trees along either side of the tarred road and open parking areas, where there is less vegetation. This will help to reduce air and sound pollution. The photograph of the avenue tress is attached as **Plate No.2**. The bill purchased against plants is provided as **Annexure No.1**.

04	Maximum	possible	solar	energy	generation	and	utilization	shall	be	Will	be
	ensured as	s an esser	ntial pa	irt of the	project.					comp	lied

Compliance:

The project is intending to use maximum renewable energy to reduce electrical consumption from KSEB. As part of this, the project proponent will install a solar panels/solar street light in the project site.

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

Compliance:

To prevent dust emissions from the road while transportation of materials, the project splash the haulage road and critical areas with the help of vehicles in regular intervals. The sprinklers are also installed in the critical area to reduce the dust emission.

Compliance report

06	Eco-restoration including the mine closure plan shall be done at the own	Noted
	cost of the project proponent.	

Compliance:

Eco restoration is in an integral part of mining activity. The eco restoration and the mine closure plan will be done at the own cost of the project proponent as per the approved mining plan.

07	At least 10 percent out of the total excavated pit area should be retained	Will be				
	as water storage areas and the remaining area should be reclaimed with					
	stacked dumping and overburden and planted with indigenous plant					
	species that are eco-friendly, if no other specific condition on					
	reclamation of pit is stipulated in the EC.					

Compliance:

The proponent has initiated steps to plant indigenous species as part of concurrent eco restoration. The project will retain 10 percent of total excavated pit as rain water storage area after closure of the mine. The remaining area will be reclaimed with stacked dumping of overburden and top soil. As part of its eco - restoration plan, the project will plant indigenous plant species that are eco – friendly on the reclaimed area.

80	Corporate Social Responsibility (CSR) agreed upon by the proponent	Complied
	should be implemented.	

Compliance:

As part of inclusive growth of the community, the project proponent executes various activities under Corporate Social Responsibility of the firm with the consultation of Panchayath. The main activities were under the sectors of education, housing, health etc. The details of CSR provided in the period of second half is mentioned in the **Table No.2**

Compliance report

Table No.2 - CSR Details

Sectors	Activities	Partners	Beneficiaries	Amount
				spent in Rs.
Health	Donation		RAJAN CHERIYAKKONNI	200
	Donation		ABUBACKER	200
			NEDUMANGADU	
	Donation		AJITH VEMBANOOR	5,000.00
	Donation		AMBIKA PALIYODE	400
	Donation		AMEER	5,000.00
	Donation		ANI NILAMEL	550
	Donation		ANILKUMAR S	6,000.00
	Donation		ARUVIKKARA HOSPITAL	200
	Donation		BABU	1300
	Donation		BALAMMA	500
	Donation		BHARATHAN, MUKKOLA	1500
	Donation		BINU KATTAKKADA	250
	Donation		CHANDRAN MULAYIRA	700
	Donation		GABRIYAL CHERIYAKKONNI	200
	Donation		GOPAN KAITHAKKUZHY	500
	Donation		JAYAN KADAMBANADU	250
	Donation		JOY MOOZHINADA	1200
	Donation		K SURESH KUMAR	200
	Donation		KUNJUMON	200
	Donation		KUTTAN NAIR	500
	Donation		LAMBRATH	400
	Donation		LEELA MAILAMMOODU	300

Compliance report

Donation	MADHAVAN	3,000.00
Donation	MADHU KADAMBANADU	10,000.00
Donation	MALLIKA	3,000.00
Donation	MANIKANTAN ARUVIKKARA	800
Donation	MOHANAN CHERIYAKKONNI	500
Donation	NELSON MAILOM	300
Donation	PRADEEP G	13,500.00
Donation	RADHAKRISHNAN PATIANT	3,650.00
Donation	RAJAN CHERIYAKONNI	200
Donation	RAJENDRAN	500
Donation	ROBINSON	250
Donation	ROBINSON MULAYARA	300
Donation	SADANANTHAN	1200
	PACHAMALA	
Donation	SAKUNTHALA	1,000.00
Donation	SALIM URIYAKKODE	2,000.00
Donation	SANTHA CHERUKKODE	1000
Donation	SASI ARYANADU	500
Donation	SHIMLA G	6,500.00
Donation	SISUPALAN	200
	CHIRAYINKKEEZHU	
Donation	SOMAN KACHANI (PATIENT)	1000
Donation	SOUMYA	2,000.00
Donation	SUBAITHA	250
Donation	SUKUMARAN NAIR	400
Donation	SUNILKUMAR	3,000.00
Donation	SURENDRAN NAIR	1,750.00
Donation	SURESHKUMAR	600

Compliance report

	Donation			
	Donation		SYAMALA PALLICHAL	1,500.00
	Donation		THANAL MATHA	200
			CHARITABLE SOCIETY	
	Donation			
	Donation		THANKAPPAN,KALLIYYOR	400
	Donation		VELAYUDHANPILLA	200
			KADAMBANADU	
	Donation		VINCENT, VELLANAD	2500
	Donation		VISHNU CHERIYAKKONNI	1,000.00
	Donation		VISWAMBHARAN	7,000.00
Education			ATHIRA VELLANAD (B COM	500.00
			STUDENT)	
Infra			AJEESH	5,000.00
structure				
development				
Social	Donation		HEARING IMPAIRMENT	500.00
			SOCIAL WELFARE	
			ORGANISATION	
			PURCHASE OF WASTE BIN	2,450.00
		Death	RAJAN	5,000.00
			THANKAPPAN	300.00
	Donation	Trust	NANMA CHARITABLE TRUST	500.00
			SANTHI THEERAM	
	Donation		KARUNALAYAM CHARITABLE	250.00

Compliance report

		TRUST	
Donation		SWAPNAKOODU	500.00
		CHARITABLE TRUST	
Donation		THANAL MATHA	200.00
		CHARITABILE SOCIETY	
Donation		AKHILA KERALA BHAKTHI	1,000.00
		SAMRAKSHANA SAMMITHI	
Donation		BHOTHI CHARITABLE TRUST	1,000.00
		PULIYARAKONAM	
Donation	Marraige	SATHYAN	3,000.00
Donation		SHANTHA	1,000.00
Donation		MARIYAKUTTY	5,000.00
Donation		SUJEENDRAN	5,000.00
Donation		BHASKARAN NAIR	1,000.00
Donation		PRAMOD	3,000.00
Donation		ANILKUMAR S	5,000.00
		Total	1,35,950.00

09	The lease area shall be fenced off with barbed wires to a maximum	Being
	height of 4ft around, before starting of mining. All the boundary	Complied
	indicators (boards, stores, markings etc) shall be protected at all times	
	and shall be conspicuous.	

Compliance:

As part of clear demarcation and to prevent falling of animals/human being/dumping of garbage etc, the project installed fencing around the area where Environmental Clearance obtained. All the boundary indicators (boards, stores, markings etc) will be protected at all times and will be conspicuous.

Compliance report

10	Warning alarms indicating the time of blasting (to be done at specific	Complied
	timings) has to be arranged as per stipulations of Explosive Department.	

Compliance:

To give warning to the labours and community people prior to the blasting in quarry, the project installed warning alarms as per the stipulation of Explosive department in the quarry site.

11	Control measures on noise and vibration prescribed by KSPCB should	Being
	be implemented.	complied

Compliance:

To reduce noise and vibration, the following measures are adopted in the project site.

- Proper maintenance of machinery and equipments
- > The machineries like breaker and excavator has well sound proof cabin so that the machine operators can work without stress due to the sound.
- > Personal protective devices i.e., ear plugs are provided to workers working in high noise areas.
- > The mining activity held in day time only.
- Noise level at quarry site checked periodically.

Blast vibrations and control measures

- Controlled blasting technique is adopted in this project in order to reduce blast vibrations.
- Ordinary detonators are using for the blasting
- ❖ The maximum charge per delay is not more than 10kg to limit the PPV values to 10mm/sec.
- Optimum delay sequence and stem to column ratio is maintaining to minimize the ground vibration intensity.

Compliance report

12	Quarrying	activities	should	be	limited	to	day	time	as	per	KSPCB	complied
	guidelines/	specific co	onditions	3.								

Compliance:

To reduce the adverse effect of Quarrying activities in the community, the mining activity will limit to day time as per KSPCB guidelines. The working time of the quarry is from 8.00am to 5.00 pm.

13	Blasting should be done in a controlled manner as specified by the	Complied
	regulations of explosives department or any other concerned agency.	

Compliance:

The blasting is carrying out in controlled manner by using ordinary delayed detonators. . All blasting activities are supervising by a qualified person with the specified regulations of explosive department.

14	A licensed person should supervise/control the blasting operations.	Complied
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Compliance:

The project proponent has appointed mining mates in the site to supervise/control exploitation of minor minerals including blasting at the project site. Annexure No. 2 is showing the certificate of qualified person.

Ī	15	Access roads to the quarry shall be tarred to contain dust emissions that	Complied
		may arise during transportation of materials.	

Compliance:

To contain dust emissions and for the trouble free transportation of materials, the project has tarred the access road of 550 meter to the quarry site. The project splashes

Compliance report

water on the road to arrest the dust production during summer season. The photograph of the road is shown in Plate No. 3.

16	Overburden materials should be managed within the site and used for	Complied
	reclamation of mine pits as per mine closure plan/ specific conditions.	

Compliance:

The overburden and topsoil need to extract during the time of mining, these natural resources being staked in the project site. This will be used for plantation, haulage roads and land filling in the mining area. No overburden will let out from the project site. The overburden materials are stacking in the designated place in the project site.

17	Height of the benches should not exceed 5m, and width should not be	Being
	less than 5m, if there is no mention is the mining plan/specific	complied
	conditions.	

Compliance:

To enhance safety and conserve environment, the quarrying is carrying out as per mining plan. The project extracts the minerals by creating benches. The benches will not exceed 5 meters of height and the width of the bench will have minimum of 5 meters.

18	Mats to reduce fly rock blast to a maximum of 10 PPV should be	Noted
	provided.	

Compliance:

The project proponent use ordinary/electric delayed detonator. The blasting is under the supervision of qualified person. The new technology of delayed blasting can reduce the incident of fly rock. Blasting during unfavourable weather conditions will be avoided. During blasting it will maintain optimum delay sequence and stem to column

Compliance report

ratio to minimize the fly rock distance. The project assures that the PPV is below 10 during blasting.

19	Maximum	depth	of	mining	from	general	ground	level	at	site	shall	not	Will	be
	exceed 10	m.											comp	olied

Compliance:

The depth of mining won't exceed beyond 10 meter or not below the level of the nearest stream bed, whichever is less. The exploration will be done as per the plan submitted before State Environment Impact Assessment Authority (SEIAA), Kerala.

20	No minin	g operations	should be	carried	out at	places	having	a slope	Noted
	greater	than 45 ⁰ .							

Compliance:

In the project site, there is no mining operation is carried out with a slope greater than 45°.

21	Acoustic enclosures should be provided to reduce sound amplifications	complied
	in addition to the provisions of green belt and hollow brick envelop for	
	crushers so that the noise level is kept within prescribed standards given	
	by CPCB/KSPCB.	

Compliance:

To maintain the noise level as per CPCB standards, the ear plugs are provided to the labours to reduce the impact of sound. Vegetation around the mining area will help to reduce noise and air pollution. This helps the noise level kept within prescribed standards.

22	The workers on the site should be provided with the required protective	complied
	equipments such as ear muffs, helmet, etc.	

Compliance report

Compliance:

To ensure the safety of workers in working site, the project has provided adequate Personnel Protective Equipments (PPE) such as helmets, ear plugs, safety belts, glows, etc.

23	Garland drains with clarifiers to be provided in the lower slopes around	Being
	the core area to channelize storm water.	complied

Compliance:

As part of storm water management, storm water drains are provided within the project site to channelize the surface runoff to the rain water collection ponds. The project is intending to develop a well defined garland drains in the lower slopes of the core area. At present storm water from the mining area is collecting in two rain water harvesting pond so that no quarry waste is letting out with storm water. At present no surface run off letting out from the project site.

1	24	The transportation of minerals should be done in covered trucks to	complied
		contain dust emissions.	

Compliance:

To avoid dust emission while transportation of materials, the project assured the trucks were covered before it leaving the project site.

ſ	25	The proponent should plant trees at least 5 times of the loss that has	Being
		occurred while clearing the land for the project.	complied

Compliance:

The project proponent has started to plant various saplings in the project area as a compensation of loss of trees while the project is clearing the land for mining. The project

Compliance report

intending to plant more tree saplings in to the project site. The bill against the purchase of plants is provided at **Annexure No.1**.

26	Disposal of spent oil from diesel engines should	be as specified under	Noted
	relevant Rules/Regulations.		

Compliance:

The project proponent is using the used oil as lubricant for machineries and other equipments. Disposal of spent oil from diesel engines will be sold only to the approved recyclers as specified under relevant Rules/Regulations.

27	Explosives should be stored in magazines in isolated place specified	complied
	and approved by the explosives department.	

Compliance:

As part of safety, Explosives are stored in the magazine. The magazine is situated in an isolated place specified and approved by the explosives department. The area surrounded to the magazine is fenced with barbed metal wire.

28	A minimum buffer distance of 100m meter from the boundary of the	complied
	quarry to the nearest dwelling unit or other structures, not being any	
	facility for mining shall be provided.	

Compliance:

To keep a safe zone to the residents, community resource and public infrastructure, the norms of Kerala State Pollution Control Board regarding the distance criteria of houses, roads, rivers and worship places is adhered by the project. There is 115 meter distance to the nearest house from the boundary of mining area.

Compliance report

29	100 m buffer distance should be maintained from forest boundaries.	Noted

Compliance:

There is no forest near to the project site.

30	Consent from Kerala Pollution Control Board under Water and Air Act(s)	Complied
	should have been obtained before initiating activity.	

Compliance:

The project has obtained consent from KSPCB under Water and Air Act(s). The copy of certificate of "Consent to Operate" (Renewal) from Kerala State Pollution Control Board is provided in **Annexure No.3**.

3	31	All	other sta	tutory clearar	nces sl	hould	have been	obtained, as	applicable,	Complied
		by	project	proponents	from	the	respective	competent	authorities	
		incl	luding tha	at for blasting	and st	torag	e of explosiv	es.		

Compliance:

The certificates obtained from concerned statutory authorities are enclosed in Annexure No.3, 4, 5, & 6

TABLE NO.3 – DETAILS OF APPROVALS OBTAINED

Name of the Statutory			Name	of the S	tatutory	Approval Number & Date
approval			authority			
Environmental Clearance			State Environmental Impact			152/SEIAA/KL/3072/2013
	order			ssment Aı	uthority,	Dt. 31-03-2017
				Kerala		
"Consent	to	Operate"	Kerala	State	Pollution	PCB/TVM-DO/ICO/AE2-
(Renewal)			Control E	Board		231/2011

Compliance report

		E/SC/KL/22/1215(E58077)
Explosive License	Ministry of Commerce &	Dt. 16-03-2016
	Industry – Petroleum &	
	Explosives Safety	
	Organization (PESO)	
License for quarry	Gram Panchayath	A4.08?2017-18 dt. 05-04-
operations		2017
Permit order	Directorate of Mining and	
	Geology	

32	In the case of any change(s) in the scope of the project, extent quantity,	Will be
	process of mining technology involved or in any way affecting the	complied
	environeme3ntal parameters/impacts as assessed, based on which only	
	the EC is issued, the project would require a fresh appraisal by this	
	Authority, for which the proponent shall apply and get the approval of	
	this Authority.	

Compliance:

At present there is no change in the scope of the project. The project will seek for a new Environmental clearance in the case of any change(s) in the scope of the project.

33	The Authority reserves the right to add additional safe guard measures								
	subsequently, if found necessary, and to take action including revoking								
	of the environment clearance under the provisions of the Environmental								
	(Protection) Act 1986, to ensure effective implementation of the								
	suggested safeguard measures in a time bound and satisfactory								
	manner.								

Compliance:

The project is willing to add all possible additional safe guard measures subsequently if the authority found necessary.

34	The stipulations by Statutory Authorities under different Acts and No.	oted
	Notifications should be complied with, including the provisions of Wate	
	(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:

The stipulated orders and directions under different act and notification including EIA notification will be scrupulously followed. A brief list of various Acts and notifications which are followed by the proponent is given below

- > Kerala Minor Mineral Concession Rules, 2015.
- ➤ Mines Act, 1952
- ➤ Explosive Rules, 2008
- > Kerala Panchayat Raj Act, 1994
- > Central Ground Water Authority
- > Water Pollution (Prevention & Control) Act, 1974
- ➤ Air Pollution (Prevention & Control) Act, 1981
- ➤ Environment Protection Act, 1986
- > EIA Notification, 2006 / 2009
- > The Kerala Promotion of Tree Growth in Non-Forest Areas (Amendment) Act, 2007.

35	The project proponent should advertise in at least two local news papers	Complied
	widely circulated in the region, one which (both advertisement and the	
	newspaper) 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 the copy of the same signed in all pages should be forwarded to the office of this authority as confirmation.

Compliance:

An advertisement in two local daily newspapers (English and Malayalam) regarding Environmental Clearance accorded to the quarry project was given within the stipulated period and the copy of the same was submitted at SEIAA Kerala. The copy of the advertisement given in two local newspapers is provided at **Annexure No.7.**

A copy of the clearance letter shall be sent by the proponent to concerned Grama/District Panchayath / 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 Environmental Clearance shall also be put on the website of the company by the proponent.

Complied

Compliance:

As per the condition stipulated in the Environmental Clearance order, a copy of the environmental clearance letter was submitted to Grama Panchayat office. There were no suggestions/representations received while processing the proposal. The acknowledgement from the Panchayat is provided in **Annexure No.8**. The Company does not have a web site and it will be launched shortly and upload the environmental Clearance order.

37	The proponent shall submit six monthly reports on the status of	complied
	compliance of the stipulated EC conditions including results of	

monitored data (both in hard 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 to the State Environment Impact Assessment Authority (SEIAA) office.

Compliance:

The compliance of the stipulated specific and general conditions of Environmental Clearance is being submitted to the State Environment Impact Assessment Authority Govt. of Kerala, and also to the Regional Office of MoEF&CC, Govt. of India both in hard copy as well as mail.

The details of Environmental Clearance should be prominently displayed in a metallic board of 3 ft x 3ft with green background and yellow letters of Times New Roman font of size of not less than 40. Sign board with extent of lease area and boundaries shall be depicted at the entrance of the quarry, visible to the public.

Compliance:

The detail of the Environmental Clearance has display on metallic board in the project site. The metallic board installed as specified in the conditions of Environmental Clearance order.

39	The proponent should provide notarized affidavit (indicating the number								nber	Complied
	and	date	of	Environmental	Clearance	proceedings)	that	all	the	
	conditions stipulated in the EC shall be scrupulously followed.									

Compliance:

An assurance in the form of affidavit was already submitted to SEIAA Kerala. The copy of the same is attached as **Annexure No.9**.

Compliance report

40	No change in mining technology and scope of working should be made	Will be					
	without prior approval of the SEIAA, No further expansion or	complied					
	modification in the mine shall be carried out without prior approval of the						
	SEIAA, as applicable.						

Compliance:

At present, the project proponent is not intending to expand the area of mine, technology and scope of working. The project will appear SEIAA for Environment Clearance if the project wants to expand its scope. The mining is progressing as per submitted plan.

41	The project proponent shall ensure that no natural water course and/or							
	water resources shall be obstructed due to any mining operations.							
	Necessary safeguard measures to protect the first order streams, if any							
	originating from the mine lease shall be taken.							

Compliance:

The project proponent will take all necessary safeguards to prevent contamination of stream as well as ground water. The project proponent will install additional clarifiers in the project site to prevent sediments and wastes from quarry site to enter in to the main stream. There is no stream originating from the mining area.

42	Monitoring of Ambient air Quality to be carried out based on the	Will be					
	notification 2009, as amended from time to time by the Central Pollution	complied					
	Control Board. Water sprinkling should be increased at places loading						
	and un loading points & transfer point to reduce fugitive emissions.						

Compliance:

The project proponent has monitored the ambient air quality as per National Ambient Air quality Standard (NAAQS). The project is intending to increase the splashing

Compliance report

of water and installed sprinklers at loading, unloading and transfer points. This activity can reduce the fugitive emission.

43 The top soil, if any, shall be temporarily be stored at earmarked site(s) only for the topsoil shall be used for land reclamation and plantation. The Over Burden (OB) generated during the mining operations shall be staked at earmarked dump site(s) only. The maximum height of the dumps shall not exceed 8m and width 20m and overall slope of the dumps shall be maintained to 45°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the bump. The entire excavated area shall be backfilled. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining.

Being complied

Compliance:

To prevent the soil erosion, the top soil and overburden will be stacked in a designated place within the project site. Only topsoil will be used for plantation. Overburden will be used for landfill and to construct haulage roads in the mining area. The excess will be stored in a designated place as per the direction of State Environment Impact Assessment Authority (SEIAA). The Environment Monitoring Cell will monitor the execution of eco restoration.

Catch drains and siltation ponds of appropriate size shall be constructed 44 around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc., The drains shall be regularly de silted particularly after monsoon and maintained properly.

Will be complied

Compliance:

The project proponent has been constructing effective garland drains to catch all the storm water during the time of monsoon season. These channels will be directed to the rain water collection pond. All sediments and silts will be settled at the bottom of the pond and only cleared water let out. The water from the pond can be used for splashing of water on roads to arrest the dust.

Being

complied

45 Effective safeguard measures such as regular water sprinkling shall be carries out in critical areas prone to air pollution and having high levels of PM₁₀ and PM_{2.5.} such as haul road, loading an un loading points and transfer points - it shall be ensured that the Ambient Air Quality Parameters confirm to the norm prescribed by the Central Pollution Control Board in this regard.

Compliance:

The project proponent is regularly spraying water in critical areas prone to air pollution with the help of vehicle. The project proponent will increase the number of sprinklers in critical area to reduce the dust emission such as loading and un loading points, haul roads and transfer points. The ambient air quality will be monitored with the help of an approved laboratory.

Fugitive dust emission from all the sources should be controlled Being regularly. Water spraying arrangements on haul roads, loading and complied unloading and at transfer point should be provided and properly maintained.

Compliance:

To prevent dust emissions, the project proponent will install sprinklers in critical area to reduce the dust emission such as loading and unloading points, haul roads and transfer

Compliance report

points. The water spraying has been carried out regularly to arrest the dust emission. The sprinklers and vehicle for water spraying will be properly marinated.

47	Measures should be taken for control of noise levels below 85 dBA	Being	
	in the work environment.	complied	

Compliance:

The level noise from all these activities will not go beyond 85dBA. The main sound generating activities are the playing of jack hammer, breaker, vehicles and blasting operations. The project proponent will take appropriate action to reduce the sound by employing possible measures. These are mentioned under the condition number 11.

48	A separate Environmental Management Cell with suitable qualified	Complied
	personal should be set up under the control of a senior executive,	
	who will report directly to the Head of the Organization.	

Compliance:

To monitor all conditions stipulated in the Environment Clearance and environment Management Plan, the project has constituted an Environment Monitoring Cell with Mr. Biju Varghese as the head of the Cell.

49	The funds earmarked for environmental protection and CSR	Will be
	activities should be kept in separate account and should not be	complied
	diverted for other purpose. Year wise expenditure should be	
	reported to the State Environment Impact assessment authority	
	(SEIAA) office.	

Compliance:

The project proponent could execute many activities under Corporate Social Responsibility (CSR) for community development. To implement these activities in a good

Compliance report

manner, the project proponent will open an account for keeping the funds earmarked for environmental protection and CSR.

50	The Regi	onal Office	of MoE	F &CC located	at Ban	galore shall	Noted			
	monitor	compliance	of the	stipulated cond	ditions.	The project				
	authorities should extend full cooperation to the officer(s) of the									
	regional	Office	by	furnishing	the	requisite				
	data/information/monitoring reports.									

Compliance:

The project proponent will extent all possible cooperation to the officers form regional office of MoEF & CC and can produce all data/information/reports when they are asking for.

51	Any appeal against this environmental clearance shall lie with the	Noted
	National Green Tribunal, if preferred within a period of 30 days as	
	prescribed under section 16 of the National Green tribunal Act,	
	2010.	

52	Concealing the factual data or submission of false/ fabricated data	Noted
	and failure to comply with any of the conditions mentioned above	
	may result in withdrawal of this clearance and attract action under	
	the provisions of Environment (Protection) Act, 1986.	

53	The	SEIAA	may	revoke	or	suspend	the	order,	for	non	Will	be
	imple	ementatio	on of a	ny of the	spe	cific or this	impl	ementat	ion o	f any	comp	olied

Compliance report

of any of the above conditions is not satisfactory. The SEIAA reserves the right to alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

Compliance:

The project proponent is willing to implement the conditions stipulated in the Environment Clearance order. The project can execute all possible measures in the project site for the conservation of environment.

54	The above conditions shall prevail not withstanding anything to the	Will be			
	contrary, in consistent, or simplified, contained in any other permit,				
	license on consent given by any other authority for the same				
	project.				

Compliance:

The project will give priority to the conditions stipulated in the Environment clearance Order for its execution.

55	This order is valid for a period of 5 years or the expiry date of mine	Noted
	lease period issued by the Govt. of Kerala, whichever is earlier.	

56	The environmental clearance will be subject to the final order of the	Noted
	courts in any pending litigation related to the land or project, in any	
	court of law.	

57	The mining operation shall be restricted to above ground water	Will be
	table and is should not intersect ground water table.	complied

Compliance report

Compliance:

The project proponent will restrict its mining operations above the ground water table.

58	All vehicle used for transportation and within the mine shall have	Complied
	"PUC" certificate from authorized pollution taking center. Washing	
	of all vehicles shall be inside the lease area.	

Compliance:

As part of reduce air pollution, the project proponent has monitoring the pollution level of all vehicles playing in the project site. This monitoring will conducted only in authorized pollution checking center. Copy PUC certificate is attached as **Annexure No. 10.**

59	Project proponent should obtain necessary prior permission of the	Noted
	competent authorities for drawl of requisite quantity of surface	
	water and ground water for the project.	

Compliance:

At present, the need of prior approval is not necessary to draw ground water and surface water for the project.

60	Regular monitoring of flow rates and water quality upstream and	Noted
	down streams of the springs and perennial nallahs flowing in and	
	around the mine lease area shall be carried out and reported in the	
	six monthly report to SEIAA.	

Compliance report

Compliance:

There is no stream or springs flowing in and around to the mine lease area. The project will install de siltation trap and other mechanism to prevent sediments and wastes from the mining area to the public drainage system.

61	Occupational health surveillance programe of the workers should	Will be	
	be under taken periodically to observe any contractions due to	complied	
	exposure to dust and take corrective measures, if needed.		

Compliance:

The project proponent will start an occupational health surveillance programme for the labous working in mining area and crusher.

M/s Travancore Blue Metal Industries (P) Ltd.

Compliance report

Plate No.1



Rain water Harvesting Pond in the project site





Avenue Trees

M/s Travancore Blue Metal Industries (P) Ltd.

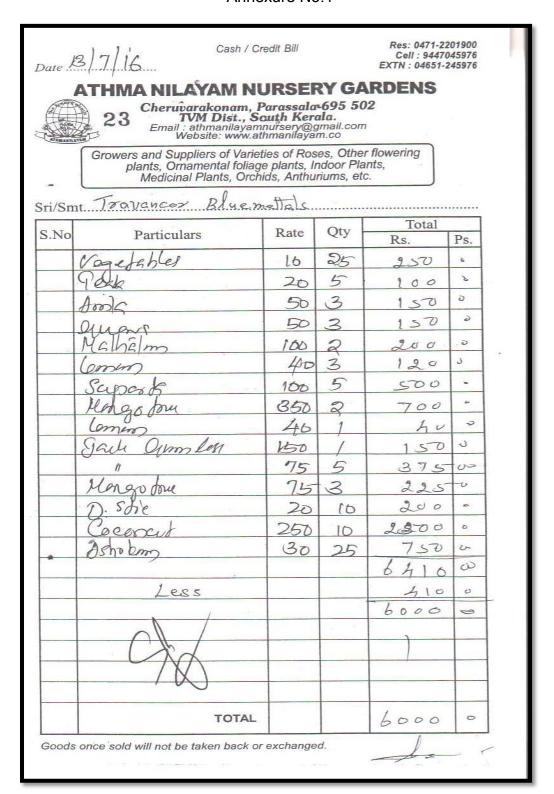
Compliance report

Plate No.3



Approach road

Annexure No.1



Bill of plants purchased

1		
	(Braid) Gan ution ale Board of (Metalliferous) Mining Examinations	• मृ०बा०नि० 1228 R CLM.1229 R
	emia to No. of Document 115 657	
	खान है THE MI	चितियम, १९४२ NE'S ACT, 1952
	खनत हैं ह	HHARL BRIDGE OF COMPETENCY
and the solution	(धात्वीय खान	विनियम, १६६१ के अधीन)
	(केवल खल काग्रेस्यले	ous Mines Regulations, 1961) वाली घालीय खानों तक सीमित) s mines having open-cast workings only)
2 2	भी	, पुत
	(निवासी) गांव	, थाना । । । । । । । । । । । । । । । । । ।
		भू स्वस्थता, सदाचार, साक्षरता और अनुभव का
3	सर्वावजनक अभाग व विना है जार है।	
	पर हुई मौखिक परीक्षा पास कर ती है इसे धात्वीय खान जिनियम् तक कार्य सीमित होता है खनन मेट समर्थता प्रमाण-पत्न दिया जात	1961 के अधीन उन धास्त्रीय खानों के लिए जिनमें केवल खुल कार्यस्मलों 🥌
	SARATHI THANAPATI CHARDA	BINKA (Name)
and instead	of Village SANCAUR	State UkiSSA-
	born on Sh Growth 1, 15-7(51X1	Son of MAGNUTANET Transfer 2
	oral examination held at BHUBANESWAR	fitess, good conduct, literacy and experience and having passed an 16/12/98
	19 is hereby granted a MIN	NING MATE'S CERTIFICATE under the Metalliferous Mines
120	Regulations, 1961, restricted to metalliferous mines ha	aving open-cast workings only.
	सचिव सचिव खनन परीक्षा बोर्ड	, अध्यक्ष खनन परीक्षा बोडं
- 11	Secretary, Board of Mining Examinations.	Chairman, Roped of Mining Examinations.
	वारीब १६ Date	
•		
والم مرسد س	The state of the s	
Artes	lion	की परीक्षा की गई बोर उसे ब
	अनाराप करा नाज ह कि श्री	का उसके दसतापूर्वक कार्य निष्पादन पर प्रभाव पड़ने की संभावना हो।
*	· Certified that he was examined and found free	from deafness, defective vision or any other infirmity, mental or
	physical, likely to interfere with the efficient dischar,	ge of his duties. 12-03-2012
	on Alled	oi Ao
		On Director of Mines Safety
	5.	To前: 4 6. 1 Bhubarleswar Radio

Certificate of Mining mate

Annexure No.3



KERALA STATE POLLUTION CONTROL BOARD

FILE NO.: PCB/TVM-DO/ICO/AE2-231/2011 Date of issue :03/04/2017

INTEGRATED CONSENT TO OPERATE - RENEWAL

Consent No: PCB/TVM-DO/ICO(R)/QRY/ 133 /2017 Valid upto: 31/03/2019

Ref: 1. Your Application dated 20/03/2017

- 2. Your Previous consent No PCB/TVM-DO/ICO(R)/QRY/197/2016 dated 04/03/2016 valid upto 31/03/2017
- 3. Your variation order dated 07/03/2015

The 'Integrated Consent to Operate' issued as per reference above to M/s Travancore Blue Metal Industries is hereby renewed up to 31/03/2019 and issued to M/s Travancore Blue Metal Industries, Kadambanad, Cheriyakonni P.O. Nedumangad, Thiruvananthapuram The consent(s)/ variation order(s) cited under reference are integral part of this renewal order and this order is subject to the conditions stipulated therein and the following modifications/ additions.

I. GENERAL

Description		Items	S.No.
	44 Lakhs	Capital Investment	1
	44 Lakhs	Capital Investment	I

II. Stack Details

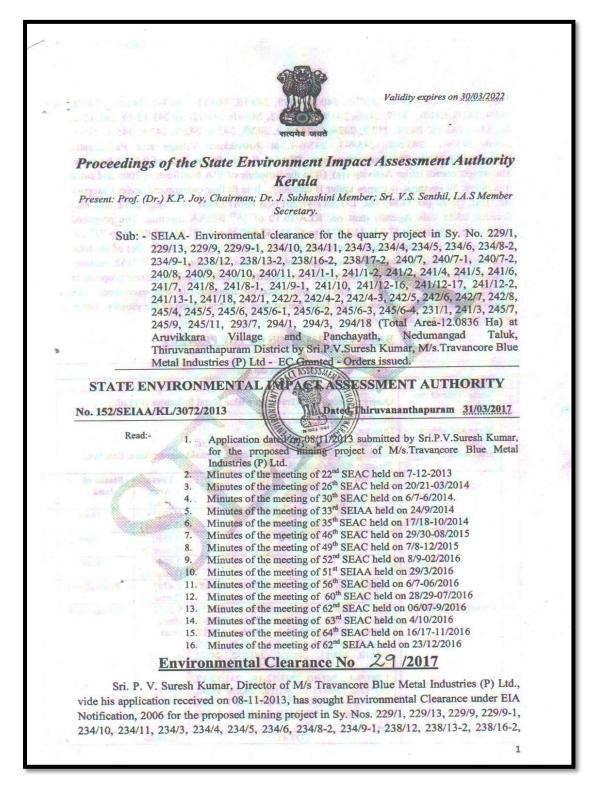
Stack No.	Source of	Emission	Stack Hei	ght above	Control
	Emission Rate(Rate(Nm3/Hr)	Ground Level(In Meters)	Roof Level(In	Equipment

III. CONDITIONS

- 5.1 Quarrying area is restricted to the land in Nedumangad Taluk, Aruvikara Village having valid lease from 4/10/2010 to 17/5/2020 on survey nos. 245/9,11, 293/7,294/1,3,18 issued by Department of Mining and Geology Thiruvananthapuram.
- 5.2 This consent will become invalid if any adverse order is passed by the Hon'ble Supreme Court, High Court, and National Green Tribunal against present quarrying and related activities.
- 5.3 Any adverse Government Order passed in the matter of quarrying by the Central Government, State Government & Pollution Control Board, etc this consent will become invalid immediately.
- 5.4 This Consent to Operate (Renewal) is issued only in accordance with norms and parameters of the Board

Copy of Consent form PCB

Annexure No.4



Copy of Environmental Clearance

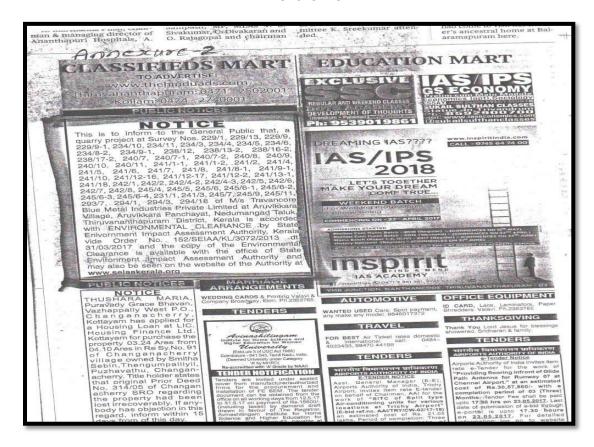
Annexure No. 5

				196
//	अन्जप्ति प्ररूप	एल. ई3 LICENCE FOI	RM LE-3	
//	(विस्फाटक नियम, 2008 की 3	भनुसूची 4 के भाग 1 के अनुच्छेर Part 1 of Schedule IV of Explos	द 3(क) से (घ) देखिए।)
(ग) उपयोग के 1	लिए एक समय पर वर्ग 1,2,3,4,5 या वर्ग Licence to possess : (c) for u	Part I of Schedule IV of Explos	sives Rules, 2	(008)
	Licence to possess : (c) for u	/ के विस्फाटक या किसी मैगजी	न में वर्ग 6	के विस्फोटक :
अनुजप्ति सं. (Licence !	No.) : E/SC/KL/22/1215(E58077)	ise, explosives of class 1, 2,3,4,5	,6 or 7 in a m	agazine
वार्षिक फीस रुपए (Ann	ual Fee Rs): 2400/-			
1. Licence is hereby gra				Control of the Contro
Shri M/S Suresh V.	nted to			HRADIE H
Industries Pvt Ltd Th	mar.P.V. (अधिभोगी / Occupier : Shri Si ekkemala-Mylom, Cheriyakonni Post, Thi	uresh Kumar.P.V.), Director,7	Fravancore B	lue Metal . A. of India
Cheriyakonni, Distri	ct-THIRUVANANTHAPURAM State-K	ruvannatnapuram District-6950 erala. Pincode - 695013	13, Kerala., 7	own/Village
שיו שופולווים שופכר	का जाता है।	0,5015		THE STATE OF THE S
2. अन्जाप्तधारी की प्रानि	न्यति Status of licensee : Individual			3 2 2
े अन् राप्ति निम्नलिखित	न प्रयोजनों के लिए तिशियान्य है।	possess for use of Nitrat	to Minture	
Licence is valid only i	or the following purpose	Safety Fuse, - के उपयोग	ने लिए	Electric and or Ordinary Detonators,
4. अनुराप्त विस्फाटको । Licence is valid for the	के निम्नलिखित किस्मों, प्रकार और मात्रा	1000		
****	following kinds and quantity of explosive	es: (再) (a)		
京 Sr. No.	नाम और विवरण	वर्ग और प्रभाग	उप-प्रभाग	मात्रा किसी एक समय में
1.	Name and Description Nitrate Mixture	Class & Division Si	ub-division	Quantity at any one time
2.	Electric and/or Ordinary Detonators	2,0	0	150 Kg.
3.	Safety Fuse	6,3	0	5000 Nos.
(ख) किसी एक कलैंडर म	स में खरीटे जाने वाने विपानेस्ट कि			2000 Mtrs
(b) Quantity of explosive	s to be purchased in a calendar month[applical	ole for licence under article 3(h) on	अनुजाप्त के 1	
हिमानिक प्राचित्र	(रखाचित्रा) स अनजप्त परिचा की तहिर ने			as above.
			ted) 29/04/20	(o.) E/SC/KL/22/1215(E58077)
		remises are situated at following	address.	
জিলা (District)	लिखित पत पर स्थित है। The licensed pook 41, ग्राम (Town/Village): Aruvikka THIRUVANANTHAPURAM	ra village, Nedumangad Talul	k, Thiruvage	wh alel (Police Station) . Node
A (a mone)	0944/1/82/9		Kerala	17014715 (Fincode) 695013
7. अन्ज्ञिष्त परिसर में नि	म्नलिखित सुविधाएं अंतर्विष्ट हैं।	ई. मेल (E-Mail) D(110) and E(172) and E(954) 4	फक्स (Fax)
premises c	onsist of following facilities.	AL:	rks, Ernaku	rtable magazine (Mfd by Thekkans lam)total three portable magazine after
° अनुज्ञप्ति समय – समय	पर यथासंशोधित विस्फोटक अधिनियम, जलिखित उपाबध्दों के अधीन रहते हुए अ		विमानोटक f	* * * * * * * * * * * * * * * * * * *
The licence is granted at	निलिखित उपाबध्दों के अधीन रहते हुए अ	नुदत्त की जाती है।	14स्पगटका	नयम, 2004 के उपबंधी, शती और
and the conditions, addit	ional conditions and the following Appear	884 as amended from time to tir	ne and the E:	xplosives Rules, 2008 framed there under
1. उपयुक्त क्रम स	5 में यथा कथित रेखाचित्र (म्शान मिना	As Asir wh	~	
Drawings (show	ing site, constructional and other details) a	गण सबधा आर अन्य विवरण ट	रशित करते ह	हुए)।
Conditions and A	Additional Conditions of this licence signed Distance Form DE-2.	d by the licensing authority		
9. यह अनज्ञप्ति तारीख 31	First 2016 32 Decree 3.0			
ਹਵ ਮੁਜ਼ਚਰਿ ਮੁਦਿਆ	मार्च 2016 तक विधिमान्य रहेगी। This!	icense shall remain valid till 31s	st day of Ma	rch 2016.
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प्रतिसंहत की जा सकती	में जहां वह सम के।	उसस सलग्न उपबंध म दशित	विवरण के उ	भनरूप नहीं पाए जाने पर निसंबित गा
under Set VIII, wherever	applicable, referred to in Part 4 of Schedul ttached hereto.	le V or if the licensed premises	under or the	conditions of this licence as set forth
and Affickure a	ttached hereto.	premises,	are not round	comorning to the description shown in
तारीख The Date - 29/04	/2011			Sd/-
1110 Date 27/01	2011	संयुक्त मुख्य विस्फोट	क नियंत्रक	Joint Chief Controller of Explosives
Amendments:				South Circle, Chennai
 Amendment of Quantity 	of Explosives/Monthly Purchase Limit date	ed · 13/01/2012		
Amendment of Quantity Amendment of Quantity	of Explosives/Monthly Purchase Limit date of Explosives/Monthly Purchase Limit date of Explosives/Monthly Purchase Limit date	ed: 12/06/2013		
or Quantity	of Explosives/Monthly Purchase Limit date	ed: 02/01/2014		
	Space for F	के पृष्ठांकन के लिए स्थान Endorsement of Renewal	/	
नवीकरण की तारीख	समाप्ति की तारीख		11	~~~
Date of Renewal	Date of Expiry	अनुजापन प्रा	धिकारी के ह	स्ताक्षर और स्टाम्प
16/03/2016		Signature o	I licensing at	ithority and stamp
. 0. 03/2010	31/03/2021	Dy. Chief Cor	troller of Ex	plosives, Ernakulam फोटक नियन्त्रक
×		For Deput	मुख्या विर Chief Cont	फाटक नियन्त्रक
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Copy of Explosive

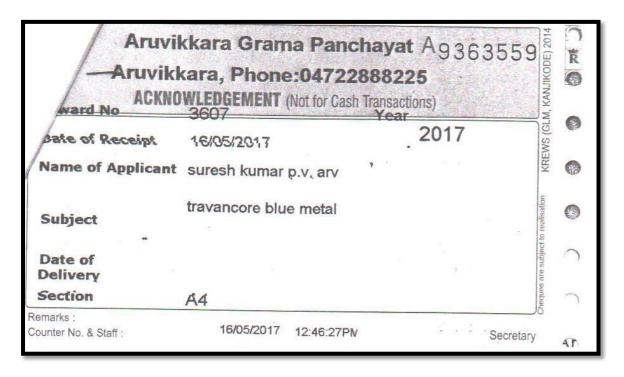
ലൈസൻസ് നമ്പർ A4. 08/2017-18 തീയതി 05. 04. 2017								
<i>[രാര ത്രുവി ഇട്ടാര</i> ഗ്രാമ പഞ്ചായത്തിൽ നിന്നും								
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വകുപ്പുകളും അതേ തുടർന്നുള്ള ചട്ടങ്ങളും അനുസരിച്ചു നൽകുന്ന								
ഡി & ഒ ലൈസൻസ്								
ചെ.വി. സുരേഷ് കൂരാർ, പ്രഖന്ത്രാവും പരും പ്രഖനങ്ങൾ എട്ടർ എട്ടരമാർ ഇൻഡസ്റ്റിസ് (രാപിലി. ട്രാവൻ കുട്ടർ എട്ടരമാർ). പ്രവർത്തനങ്ങൾ പരും വരുത്തനങ്ങൾ പരും വരുത്തന്റെ പരും വരുത്തനങ്ങൾ പരും വരുത്തന്റെ പരും വരും വരുത്തന്റെ പരും വരുത്തന്റെ വരുത്തന്റെ പരവരുത്തന്റെ പരും വരുത്തന്റെ പരവരുത്തന്റെ പരും വരുത്തന്റെ പരും വരുത്തന്റെ വരുത്തന്റെ പരവരുത്തന്റെ പരും വരുത്തന്റെ വരുത്തന്നെ വരുത്തന്റെ വരുത്തന്റെ വരുത്തന്നെ വരുത്തന്ന് വരുത്തന്നെ വരുത്തന്നെ വരുത്തന്ന് വരുത്തന്നെ വരുത്തന്ന് വരുത്തന്നെ വരുത്തന്നെ വരുത്								
					கைട്ടിടത്തിന്റെ നമ്പരും സർഭവ നര . 245/9, 245/11, 293/7, 294/1, വാർഡു നമ്പരും 294/3, 294/18, 245/7, 241/3.			
					ലൈസൻസ് കാലയളവ്	05.04.2017	മുതൽ 3/.03. 2018 വരെ	
ഈടാക്കിയ ലൈസൻസ് ഫീസ്	4000/- 030	117040100089 05-04-2017						
ലൈസൻസ് അനുവദിക്കു നന്തിനായി ഹാജരാക്കിയ നിരാക്ഷേപ പത്രങ്ങളുടെ വിശദാംശങ്ങൾ (നമ്പർ, തീയതി, കാലയളവ്, നൽ കിയ അധികാരസ്ഥാനം)	1. PCB/TVM- DO/10	Polution Contro / Board ent to Operate-Renewal CO(R) QRY /133/2017 dtd 3.4.17 O/R)/QRY /134/2017 dtd 3.4.17 OCR) QRY /135/2017 dtd 3.4.17 OCR) QRY /135/2017 dtd 3.4.17 31.03.2019.						
The same of the sa		എസ്. സൂനികേര് ന്						
STATE OF THE PARTY OF	Poro!	അഭൂവിക്കര ഗ്രാമ പത്ത്വാക്കുന്നു. കേരള, ഉത്തു വിക്കര പില, തിരുവനത്തുന്നു കേരള, ഉത്തു പിന്റ് - 898 884, പോണ്. 892 288889 18889470691						

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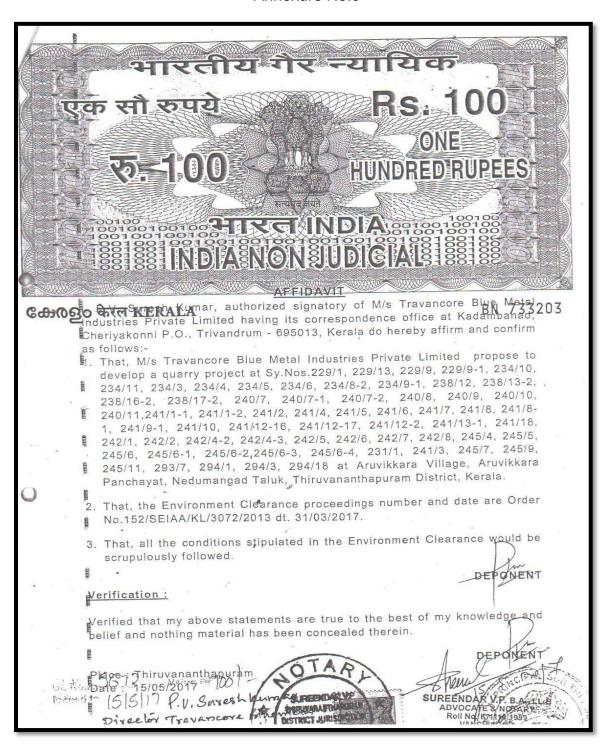




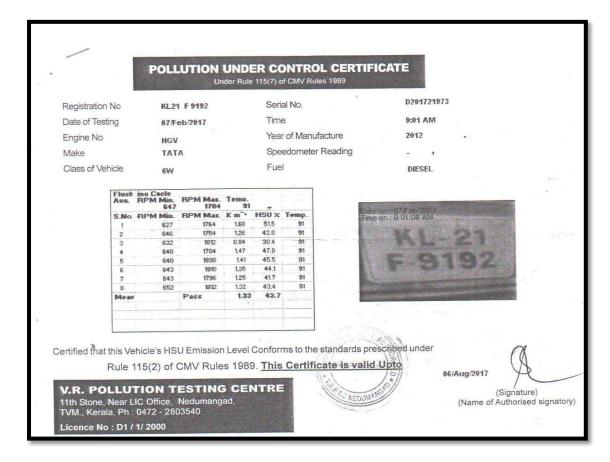
Advertisement in News papers



Acknowledgment from Gram Panchayat



Copy of Affidavit



Copy of PUC Certificate

Annexure No.11



TEST REPORT

Test Report No: SEAAL/1807/EN/R234	Date: 04.08.2018	Page 1 of 1
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	CUS	TOMER DETAILS	
Name & Address		M/s Travancore Bluemetal Industries Pvt Ltd Kadambad, Cheriyakonni Thiruvananthapuram District	
Customer Details	Survey No	231/1,241/3,245/7,245/9,245/11,293/7,294/1 294/3,294/18	
	Village	Aruvikkara	
	Taluk	Nedumgad	
	District	Thiruvananthapuram	
	State	Kerala	
Customer Reference		Test Request Form Dated 30.07.2018	
	S	AMPLE DETAILS	
Source of sample		Ambient Sound Level	
Sample Code		SEAAL/1807/EN/S234	
Location of Monitoring	g	Near East side Boundary	
Date of Monitoring		30.07.2018	

DAYTIME	RESULT	NIGHTTIME	RESULT
06.00 Hrs	36.5 dB (A)	23.00 Hrs	33.4 dB (A)
07.00 Hrs	39.1 dB (A)	00.00 Hrs	35.8 dB (A)
08.00 Hrs	43.2 dB (A)	01.00 Hrs	36.5 dB (A)
09.00 Hrs	46.6 dB (A)	02.00 Hrs	36.1 dB (A)
10.00 Hrs	48.9 dB (A)	03.00 Hrs	36.8 dB (A)
11.00 Hrs	51.9 dB (A)	04.00 Hrs	35.8 dB (A)
12.00 Hrs	49.3 dB (A)	05.00 Hrs	37.5 dB (A)
13.00 Hrs	48.5 dB (A)	RESULTS	
14.00 Hrs	48.9 dB (A)		
15.00 Hrs	49.3 dB (A)		
16.00 Hrs	50.4 dB (A)	Noise Level (Leq) Daytime	47.4 dB (A)
17.00 Hrs	50.8 dB (A)	Hoise Devel (Deg) Daytine	
18.00 Hrs	45.5 dB (A)		
19.00 Hrs	42.1 dB (A)		
20.00 Hrs	38.4 dB (A)	Noise Level (Leq) Nighttime	36,1 dB (A)
21.00 Hrs	37.9 dB (A)	Noise Level (Led) Nighttime	00/1,db (A)
22.00 Hrs	35.3 dB (A)		

End of Report

For and on behalf of Standards Environmental & Analytical Laboratories

Laiju P. N. Laboratory Head

The results are related only to the samples submitted for analysis and this test report shall not be reproduced except in full, without the written approval of the laboratory.

Standard⁵ Environmental & Analytical Laboratories

Accreditation and Approval: NABL as per ISO 17025: 2005 & "A" Grade laboratory of KSPCB
K.J. Tower, Pathalam, Udyogamandal P.O., Ernakulam-683 501, Tel. 0484-2546660, 93 87 27 24 02, 90 74 34 14 43
Web: www.sealabs.in, E-mail: seaalab@gmail.com, info@sealabs.in

Result of Noise

Annexure No.12





TEST REPORT

Test Report No: SEAAL/1807/EN/R231 Date: 04.08.2016 Fage 1 01 1	Test Report No: SEAAL/18	07/EN/R231	Date: 04.08.2018	Page 1 of 1
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	CUSTOM	IER DETAILS	
Name & Address		M/s Travancore Bluemetal Industries Pvt Ltd Kadambad, Cheriyakonni Thiruvananthapuram District	
Customer Details	Survey No	231/1,241/3,245/7,24 294/3,294/18	5/9,245/11,293/7,294/1
	Village	Aruvikkara	
	Taluk	Nedumgad	
	District	Thiruvananthapuram	
	State	Kerala	
Customer Reference		Test Request form dated 30.07.2018	
	SAMPL	E DETAILS	
Source of Sample	Ambient Air	Sample Code	SEAAL/1807/EN/S231
Location of Monitoring	Near East Side Boundary	Sampled By	By Laboratory
Date of Monitoring	30.07.2018	Test Started On	01.08.2018
Sample Received On	31.07.2018	Test Completed On	02.08.2018
Humidity	70 %	Sampling Procedure	IS 5182 Part V & XIV

SL NO	TEST PARAMETER	TEST METHOD	UNIT	RESULTS	NAAQ STANDARD
01	Particulate matter (PM ₁₀)	IS 5182 Part 23: 2006 RA 2012	μg/m³	49.6	100
02	Particulate matter (PM _{2.5})	EPA 40 CFR Part 50 Appendix - L	μg/m³	21.2	60.0
03	Sulphur dioxide (SO ₂)	IS 5182 Part 2: 2001 RA 2012	μg/m³	< 2.00	80.0
04	Nitrogen dioxide (NO ₂)	IS 5182 Part 6: 2006 RA 2012	μg/m³	< 2.00	80.0

End of Report

For and on behalf of Standards Environmental & Analytical Laboratories

Authorized Signatory

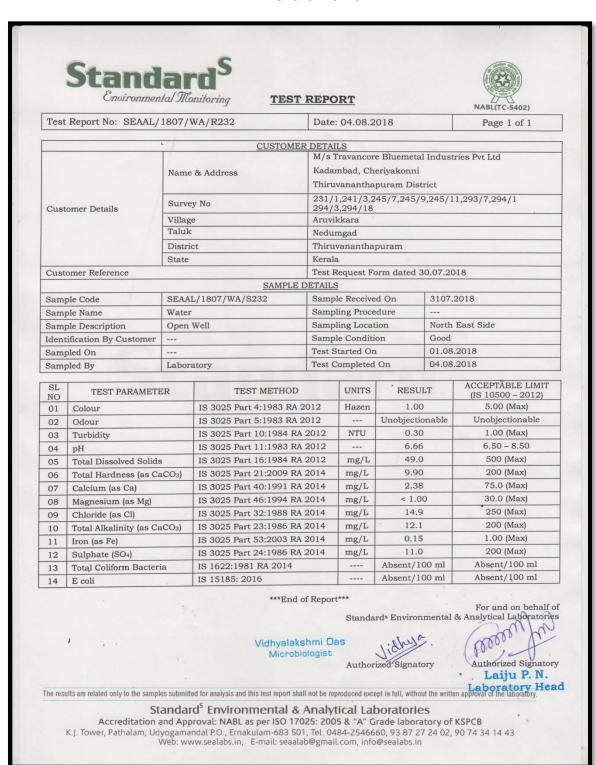
Laiju P. N. Laboratory Head

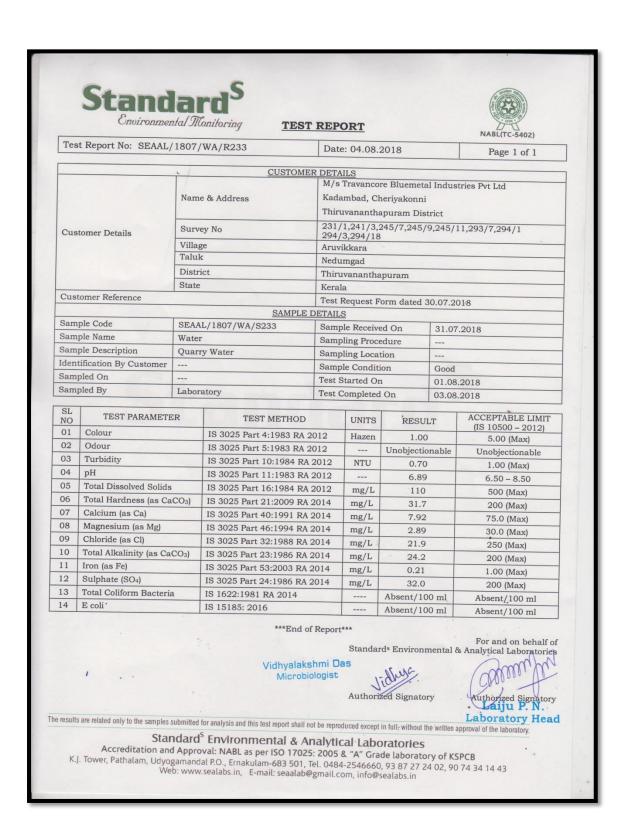
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Web: www.sealabs.in, E-mail: seaalab@gmail.com, info@sealabs.in

Result of Air





M/s Travancore Blue Metal Industries (P) Ltd.

Compliance report

Result of Water