

Date: 01.06.2022

To,
The Director
Ministry of Environment and Forest
Regional Office (Southern Zone)
Kendriya Sadan, 17th Main Road, II Block, Koramangala
Bangaluru – 560 034

Sub: Six monthly compliance report to the Environment Clearance [File No: J-11011/106/2008-IA.II(I)] granted to M/s NICOMET Industry Limited (NIL), Plot No-15, 19, 20 Cuncolim Industrial Estate, Cuncolim Goa for the period October 2021 to March 2022.


Respected Sir,

Reference to the subject cited above we would like to bring to your notice that, by an order dated 14.12.2018 the National Company Law Tribunal, Mumbai (“NCLT”) has directed initiation of Corporate Insolvency Resolution Process (CIRP) against NIL. During the CIRP, the Committee of Creditors (CoC) rejected all the three resolution proposals received for NIL and had approved liquidation of NIL. NCLT by its order dated 16th December 2020 taking note of the decision of CoC of NIL directed liquidation of NIL and appointed Mr. Divyesh Desai as the official liquidator. Following the due procedure, the official liquidator conducted an E-auction of assets of NIL on 7th July 2021. Malco Energy Limited (MEL) was declared as the highest bidder for the assets of the NIL comprising of composite unit situated at Cuncolim Industrial Estate. On 15th July 2021 MEL was issued letter of acceptance of offer for the assets of NIL by the liquidator.

It is to inform you that after the purchase of certain assets of Nicomet Industry we have not started our production, however we are herewith submitting the condition wise compliance report as per the conditions laid down in the Environmental Clearance File No: J-11011/106/2008-IA.II(I) dated 28/10/2009 for the period **October 2021 to March 2022**

Thanking You

Yours faithfully,


Mr. Sumit Gupta
CEO
Malco Energy Limited

C.C.: Member Secretary GSPCB

MALCO Energy Limited

Works: L-15, L-19, L-20, M-11, Landfill Site, Cuncolim Industrial Estate, Cuncolim, South Goa – 403703, India

Website: www.vedantalimited.com

Registered Office: SIPCOT Industrial Complex, Madurai Bypass Road, Thoothukudi (Tamil Nadu) - 628 002

T +91-461 424 2591 F +91-461 424 2829 | Website: www.vedantalimited.com

CIN: U31300TN2001PLC069645

**Compliance Report to Environment Clearance issued by Ministry of Environment and Forest for
Nicomet Industry Limited**

Environment Clearance No.J-011/106/2008-IA.II (I) Dated 28.10.2009

Period October 2021 to March 2022

1) Specific Conditions

| Sr. No | Specific Condition | Compliance Status |
|--------|---|---|
| i) | Environment clearance is subject to the final order of the Hon'ble Supreme Court of India in the matter of Goa foundation Vs Union of India in writ petition (Civil) No 460 of 2004 as may be applicable to this project | Noted |
| ii) | Online ambient air monitoring and continuous stack monitoring facilities for all the stacks and sufficient air pollution control devices shall be provided to keep the emission levels below 100 mg /Nm ³ . Volatile organic compounds (VOCs) and acid mist shall be monitored along with other parameters like SPM, RSPM, SO ₂ , NO _x . SO ₂ emissions from process shall also be controlled by connecting the vents of the reactor to the common header and scrubber. The reports for ambient air, stack and fugitive emission shall be submitted to the ministry's Regional office at Bangalore, Goa Pollution Control Board & CPCB. | <p>CPCB has exempted the unit from the condition to carry out online effluent and emission monitoring system, copy of letter is attached herewith as Annexure_1a</p> <p>We are a hydrometallurgical unit engaged primarily into the production of Nickel and Cobalt Metal and their salts from the ores/concentrates/hydroxide material of Nickel and Cobalt through solvent extraction technology. We do not have any Furnace, Smelter or Cupola furnace. We do not use the fuel such as Petcock, Coal, lignite which leads to the emission of gas/dust in the ambient area. We have stacks only for the Boiler and fuel used is bio-fuel briquettes, Thermic fluid heater and for DG sets fuel used is LSHS/HSD oil which is directly sourced from the refinery. AAQ monitoring is carried out through MoEF recognized laboratory as specified by GSPCB & the reports submitted regularly to GSPCB. Report is attached as Annexure_1b.</p> <p>During the reporting period, the plant operations have not resumed, we will be undertaking analysis of the stacks at regular intervals by MoEF recognized laboratory & will regularly submit the report to the GSPCB as per our consent condition and MoEF through half yearly reports.</p> |
| iii) | Bag filters shall be provided to process units. In copper cell house, all the cells shall be covered and SO ₂ emissions from process shall be controlled by connecting the vents of the reactor to the common header to control acid mist emission. The mist emissions from the vent shall be collected and pass-through the scrubber. The scrubbed solution shall be properly treated and recycled to the scrubber. The scrubbed solution | Not Applicable. Stacks are equipped with cyclone separator system is in place. CPCB has exempted the unit from the condition to carry out online effluent and emission monitoring system, refer annexure_1a. Raw material (Nickel Cobalt Mixed Hydroxide material) is imported in sealed jumbo bags of 1 MT capacity and charged directly into the reactor. There is no open handling of the solid material and there is no dust/fumes emission in the |

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| | shall be properly treated and recycled to the process. Periodic monitoring of vents from condensers shall be carried out and shall be within the permissible limit as per E (P) Act, 1986. | process for the installation of bag filter in the process plant. Copper production has been stopped and Copper cell house is not in operation. |
| iv) | Arrangements for the control and monitoring of the odorous chemicals shall be made | Not Applicable. There is no use of any odorous chemical in the process. |
| v) | Online ambient air monitoring and continuous stack monitoring facilities for all the stacks and sufficient air pollution control devices shall be provided to keep the emission levels below 100 mg /Nm ³ .The reports for ambient air, stack and fugitive emission shall be submitted to the ministry's Regional office at Bangalore, Goa Pollution Control Board & CPCB . | This is a repeat condition, The response is given in specific condition no ii. |
| vi) | Dust extraction system and dust suppression system like water sprinkling shall be adopted in material handling section to control fugitive emissions. Bag filters shall be provided at ore handling and storage section. Fugitive emissions from concentrate shed, concentrate unloading area shall be controlled by water sprinklers. | Dust extraction system is Not applicable, as there is no dust generation during any of the process. The raw material is brought in sealed jumbo bags of 1 MT capacity and charged directly into the reactor. There is no open handling of the solid material and there is Raw material is stored in covered shed. There is no dust/fumes emission in the process for dust extraction system. For dust suppression system, water sprinkling is carried out to suppress the vehicular dust in & around the premises. |
| vii) | Secondary fugitive emissions from Blast furnace shall be controlled within the latest permissible limits issued by the ministry and regularly monitored. Guidelines /Code of Practice issued in this regards by the CPCB shall also be followed. Data on fugitive emissions shall be recorded and maintained. | Not applicable. We do not have blast furnace hence there are no secondary fugitive emission. However AAQM monitoring is carried out by MoEF recognized laboratory. |
| viii) | Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product. | Complied. we do water sprinkling to suppress the vehicular dust in & around the premises during handling of raw material & finished products. |
| ix) | Total water requirement from Goa Industrial Development Corporation (GIDC) water supply shall not exceed 148 m ³ /day. No ground water shall be used during expansion of the project. All the effluent shall be treated (forced evaporation) and treated wastewater (condensate) shall be reused in the manufacturing process. | Plant operations not yet started. The source of water will be GIDC. We use GIDC water for our manufacturing process and its limit do not exceed. No ground water is used . All the process water is treated in triple effect evaporator to produce anhydrous sodium sulphate crystal which is sold as by-product. The treated effluent water is reused. |

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| | Domestic effluent shall be treated in septic tank followed by soak pit and used for green belt development. | We have installed a Sewage Treatment Plant (STP) for treating the domestic effluent and the discharge water will be reused in the process |
| x) | All the wastewater including process washings, boiler blow down and DM plant regeneration etc. shall be treated in the Effluent Treatment plant (ETP) and treated waste water (condensate) shall be reused in the manufacturing process. All sodium sulphate solution shall be treated in triple effect evaporation plant to separate out sodium anhydrous crystals. Condensate shall be recycled back in the process .The cobalt residue shall be treated in Residue treatment Facility (RTF) to extract cobalt and copper metal to minimum level. 'Zero' discharged shall be adopted and no wastewater shall be discharged outside the premises. | Complied. All the waste water including process washings, boiler blow down and DM plant regeneration, condensate etc reused in the manufacturing process and treated in triple effect evaporator from which we produce anhydrous sodium sulphate crystal which is saleable product. The process residue undergoes physical and chemical treatment where we extract metal values such as Nickel, Cobalt etc and then stabilised, neutralised and disposed in secured land fill. No treated process effluent is discharged outside the premises. |
| xi) | The leachate residue shall be converted into slurry and then transferred to reactors for acid washing in series of reactors to ensure complete dissolution acid soluble as well as water soluble metals. Re-pulped slurry shall be transferred to series of thickness for solid liquid separation. Overflow containing recovered metal shall be treated with lime to precipitate metals and underflow slurry shall be recycled to the exiting leaching process. | Complied. |
| xii) | Regular monitoring of influent and effluent water for all the relevant parameters including trace metals (Cu, Cd, Zn, Mn and Ni) shall be ensured and treated wastewater shall meet the norms prescribed by the Goa State Pollution Control Board or described under the E(P) Act whichever are more stringent and reports shall be submitted six monthly to the Ministry Regional Office at Bangalore, Goa SPCB and CPCB. | Not Applicable, since there is no effluent generated. As mentioned above, the process water is evaporated and converted into sodium sulphate crystals and sold as byproduct. . Ours is a zero-liquid discharge system and there is no other effluent from the process. |
| xiii) | The Waste cake generated during the treatment of cobalt raw material in leaching plant shall be stockpiled in specific area and treated in residue treatment facility (RTF) to extract cobalt and copper metal to minimal level. The waste cake from the filter press shall be treated with lime in a mixer to stabilize the residual trace metals and after extraction of metals shall be disposed off to secured captive landfill /authorized recyclers/reprocesses. | The Process Residue is solid which is treated & stabilized chemically & physically to precipitate metal values to minimal level in the present operating system through continuous process. After treatment & stabilization finally disposed off in Secured Landfill Facility. |

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| xiv) | Hazardous wastes like process sludge shall be disposed at its captive hazardous waste secured landfill facility (SLF). Proper secured landfill shall be constructed as per the CPCB guidelines or proper arrangement shall be made for the proper disposal of hazardous waste in authorized TSDF in advance before the current facilities are exhausted. All the other solid wastes shall be disposed off in the environment friendly manner or provided to authorize recyclers only. | The stabilized process residue disposed in Secured Landfill Facility. |
| xv) | Membership to authorized TSDF shall be obtained and a copy of valid authorization shall be submitted to the Ministry. | We have obtained membership with authorised TSDF in Goa, copy of which is attached herewith as annexure_1c. |
| xvi) | As proposed, green belt shall be developed in 44% area in and around the plant as per CPCB guidelines in consultation with Divisional Forest Officer (DFO). | Out of proposed Green belt of 9650sq. metre 2256 sq. metre area has been developed in and around the plant premises and further development is in progress will be completed by Oct'23 |
| xvii) | All the recommendations made in the charter on corporate Responsibility for Environment Protection (CREP) shall be strictly implemented. | The recommendations are implemented and being monitored details are provided in annexure_1d |
| xviii) | The company shall provide housing for construction labour within the site with all necessary infrastructure and facilities such as cooking ,mobile toilets ,mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary strictures to be removed after the completion of the project. | The expansion project was completed by earlier owner in the year 2010. At present no labour is staying in the company premises. |

2) General Conditions

| Sr. No | General Condition | Compliance Status |
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| i) | The project authorities must strictly adhere to the stipulations made by the Goa Pollution Control Board (GPCB) and the State Government. | Noted and agreed to comply |
| ii) | No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. | Agreed |
| iii) | The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19th May, 1993 and standards prescribed from time to time. The Goa Pollution Control Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emission level shall go beyond the prescribed standards. Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit. | Complied, however CEMS being not applicable as per order no B-33014/7/2016/PCI-II/7530 dated 19.01.2016 from CPCB. (Refer annexure_1a). As such interlocking facilities not applicable. |

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| iv) | At least four ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO ₂ and NO ₂ are anticipated in consultation with the Goa Pollution Control Board. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bangalore and Goa Pollution Control Board, CPCB once in six months. | Complied, AAQ monitoring is being carried out in consultation with and as per CTO conditions of GSPCB. |
| v) | In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Further, specific measures like water sprinkling around the coal stockpiles and asphaltting or concreting of the roads shall be done to control fugitive emissions. | There is no fugitive emission in the plant. Coal is not used in the process. Water sprinkling done to control dust emission during vehicular movement |
| vi) | Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose. | Not Applicable since there is no effluent generated. The process water is evaporated and converted into sodium sulphate crystals and sold as byproduct. Ours is a zero-liquid discharge system and there is no other effluent from the process |
| vii) | The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time). | Complied. Noise controls measures provided & periodical monitoring carried out it is found that noise levels are within limits. |
| viii) | Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act. | Plant operations has not been started. Pre-Medical of all employees has been conducted. Reports of few employees has been attached in Annexure 1e |
| ix) | The Company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table. | We are in a process of developing a rain water harvesting structure in consultation with experts expected to complete by Dec'22. |
| x) | The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc. Suggestions made during the public hearing shall be implemented. | Environment measures and safeguards have been implemented to prevent pollution. Public hearing for the project was exempted. CSR activities like Nand Ghar is implemented in plant area to support childcare & women development through modern technology, improved education, sanitation & hygiene. |
| xi) | As proposed, Rs. 1.50 Crores earmarked towards the capital cost and recurring cost/annum towards the environmental pollution control measures shall be judiciously utilized to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose. | Complied. Various Environmental protective measures are implemented. These includes ETP, covered sheds, appropriate stacks, STP. We have dedicated environment budget for managing the recurring expenditures. This budget is not diverted for any other activity. Photos showing various environment |

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| | | protective measures carried out after taking over of assets is attached as Annexure_1f |
| xii) | A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / Municipal Corporation, Urban Local Body and 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 web site of the company by the proponent. | Complied. The EC letter is put up on company web site on following link https://sesagoaironore.com/sustainability/hs/e/environment-reports/ |
| xiii) | The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF at Bangalore, the respective Zonal Office of CPCB and the Goa SPCB. The criteria pollutant levels namely; SPM, RSPM, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain. | The plant has not started its operation, Compliance status will be sent to regional Office of MoEF and GSPCB & will be updated on website periodically Displayed board stating pollutant level at main Gate will be put up by March 23 |
| xiv) | The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEF the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Bangalore / CPCB / Goa SPCB shall monitor the stipulated conditions. | Will be Complied |
| xv) | The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company alongwith the status of compliance of environmental conditions and shall also be sent to the Regional Office of the MOEF at Bangalore by e-mail. | The environment statement (Form-V) for the financial year will be submitted to GSPCB before 30 th September 2022 and same will be displayed on website. Copy of the same will be sent to Regional Office of the MoEF |
| xvi) | The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the Goa SPCB and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office. | Complied by earlier owner |

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| xvii) | Project authorities shall inform the Regional Office at Bangalore as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work. | Complied by earlier owner |
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केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
(पर्यावरण एवं वन मंत्रालय, भारत सरकार)
(MINISTRY OF ENVIRONMENT & FORESTS, GOVT. OF INDIA)

SPEED POST

B-33014/7/2016/PCI-III/

January 19, 2016

To

Nicomet Industries Ltd.
L-15/19/20, Cuncolim, Industrial Estate
Cuncolim, Goa-403703

Sub.: Withdrawal of Notice under Section 5 of the Environment (Protection) Act, 1986 regarding installation of on-line effluent and emission monitoring system

Ref.: Notice under Section 5 of the Environment (Protection) Act, 1986 dated July 23, 2015 regarding installation of on-line effluent and emission monitoring system

WHEREAS, integrated steel plants and sponge iron units are identified as one of the 17 categories of highly polluting industries which have been discharging environmental pollutants directly or indirectly into the ambient air and water, having potential threat to cause adverse effect on the water and air quality;

WHEREAS, the Central Government has notified the standards for discharge of environmental pollutants from various categories of industries under the Environment (Protection) Act, 1986 and the rules framed there under;

WHEREAS, there is need to inculcate habit of self-monitoring within the industries for complying with the prescribed standards and this can be achieved by the methods like installing online effluent and emission monitoring devices;

WHEREAS, for strengthening the monitoring and compliance through self-regulatory mechanism, online source emission and effluent monitoring systems need to be installed and operated by the industries on 'polluter pays principle' ;

WHEREAS, a direction under section 18 (1) (b) of the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981 was issued on February 05, 2014 to all the State Pollution Control Boards (SPCBs)/ Pollution Control Committees (PCCs) for installation of online emission monitoring system w.r.t. PM and SO₂ parameters & online effluent monitoring system w.r.t. pH, flow, BOD, COD and TSS in iron & steel industries;

WHEREAS, effluent parameters phenol and cyanide were added for online installation in iron and steel plants with by-product recovery type coke ovens;

WHEREAS, considering the requests/ representations received from industries/ industrial associations/ SPCBs / PCCs, an extension of time up to June 30, 2015 for installation of online monitoring systems was granted vide direction dated March 02, 2015 under section 18 (1) (b) of the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981;

WHEREAS, a letter vide dated May 29, 2015 was issued by the Chairman CPCB to all the SPCBs/ PCCs informing that no further extension of time will be given after June 30, 2015 and withdrawal of consent to operate along with forfeiture of bank guarantee of non-complying units;

contd...

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032

'Parivesh Bhawan', East Arjun Nagar, Delhi - 110032

दूरभाष / Tel. : 43102030, फैक्स / Fax : 22305793, 22307078, 22307079, 22301932, 22304948

ई-मेल / e-mail : cpcb@nic.in वेबसाइट / Website : www.cpcb.nic.in

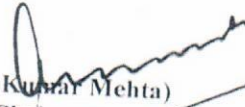
WHEREAS, concerned SPCB/ PCC issued directions under section 33A of the Water (Prevention & Control of Pollution) Act, 1974 and section 31A of the Air (Prevention & Control of Pollution) Act, 1981 to install the online monitoring system by June 30, 2015 and to submit bank guarantee of 100% of the cost of online emission & effluent monitoring system;

WHEREAS, the Ministry of Environment & Forests, Government of India, vide Notifications No. S. O. 157 (E) of 27.02.1996 and S. O. 730 (E) dated 10.07.2002, has delegated the powers vested under Section 5 of the Environment (Protection) Act, 1986 (29 of 1986) to the Chairman, Central Pollution Control Board, to issue directions to any industry or any local body or any other authority for violations of the standards and rules notified under the Environment (Protection) Rules, 1986 and amendment thereof;

WHEREAS, Show Cause Notice under Section 5 of Environment (Protection) Act 1986, was issued on July 23, 2015 to all integrated iron & steel plants and sponge iron units to show cause as to why the unit should not be closed down if, the unit has not complied fully with the directions issued w.r.t. installation of online emission & effluent monitoring system by June 30, 2015. Further it was directed to submit documentary evidence regarding status of installation and connectivity;

WHEREAS, your representation dated September 03, 2015 was received in response to above mentioned notice, wherein it was requested to exempt you from installing online monitoring system as the unit is not among 17 category of highly polluting industries. The response was examined and it was noted that the unit doesn't fall under 17 category of highly polluting industries;

NOW, therefore in view of above the show cause notice issued under Section 5 of the Environment (Protection) Act, dated July 23, 2015 is withdrawn.


(Arun Kumar Mehta)
Chairman

42m



malco energy

19th May, 2022

Ref. No. VEDANTA/MEL/ENVMT/2022-23/01

To,
The Member Secretary,
Goa State Pollution Control Board,
Near Pilerne Industrial Estate
Opp. Saligao Seminary
Saligao- Bardez
GOA - 403511

Sub: - Submission of Environment Monitoring Reports as per conditions mentioned in the Consent to Operate, reg.

Ref: - 1. Consent to operate the Industry under the Water Act, Air Act & Hazardous Waste Authorization order bearing No. 12/2019-PCB/141851/R0001303 dt. 15/09/2020, Amendment No.12/2019-PCB/141851/R0001303/Amde-378 dt.04/04/2022


2. Consent to operate the CSLF under the Water Act, Air Act & Hazardous Waste Authorization order bearing No. 12/2019-PCB/71338/R000346 dt. 23/09/2020, Amendment No.12/2019-PCB/71338/R000346/Amde-379 dt.04/04/2022

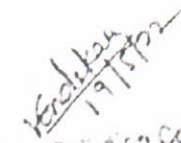
Dear Madam,

We have conducted the Environment Monitoring through M/s.Mineral Engineering Services, Ballari, Karnataka as per conditions mentioned in the Consent to Operate and submitting hereby the reports for your kind perusal and records:

- 1. Ambient Air Quality Monitoring Report
- 2. Test Well Analysis Report (CSLF)
- 3. Noise Level Monitoring Report
- 4. Soil Test Report (Industry and M-11)

Thanking You,
Yours Faithfully,


Sumit Gupta
Authorized Signatory
Malco Energy Ltd


Goa State Pollution Control Board
Opp. Saligao Seminary
Saligao Goa 403 511

MALCO Energy Limited

Works: L-15, L-19, L-20, M-11, Landfill Site, Cuncolim Industrial Estate, Cuncolim, South Goa - 403703, India
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CIN: U31205TN2001PLCDD645



MINERAL ENGINEERING SERVICES

Recognised by GOV. OF INDIA Under EPA 1986 vide Gazette Notification No. S.O. 657(E) dated 28.02.2018. Recognition Valid Upto: 25.02.2023



WATER TEST REPORT

Table No. 4
MES/NTU15/20

Name of the Project : Malco Energy Limited, (Represented by Shri. Sumit Gupta)
 Name of the Location : Plot No. 1-15/19/20, Cuncolim Industrial Estate, Cuncolim, Salcete Goa
 Name of the Location : Captive Secured Landfill Site
 Month : May, 2022
 Date of sampling : 04.05.2022
 Date of Report : 14.05.2022
 Report No : MES/SSWRN/76
 Ref : IS 10501:2012 Norms (Drinking Water Standards)

| Sl. No | Parameters | Method of Testing | Desirable Limits | Permissible Limits | Result | | | | |
|--------|--|-------------------------------|------------------|--------------------|--------|--------|--------|-----|--------|
| | | | | | TW1 | TW2 | TW3 | TW4 | TW5 |
| 1 | Colour (Hazen Units) Max | IS 3025 (Part 4) | 5 | 15 | <1 | <1 | 1 | | 1 |
| 2 | pH | IS 3025 (Part 11) | 6.5 to 8.5 | 6.5 - 8.5 | 6.90 | 7.60 | 6.80 | | 6.90 |
| 3 | Chemical Oxygen Demand (COD) mg/l | IS 3025 (Part 58) | -- | -- | <6 | <6 | <6 | | <6 |
| 4 | Biochemical Oxygen Demand (mg/l) BOD ₅ 27°C | IS 3025 (Part 44) | -- | -- | <2 | <2 | <2 | | <2 |
| 5 | Oil & Grease mg/l | IS 3025 (Part 39) | -- | -- | <1 | <1 | <1 | | <1 |
| 6 | Electrical Conductivity (µmhos/cm) | IS 3025 (Part 14) | -- | -- | 158 | 815 | 510 | | 440 |
| 7 | Turbidity, NTU Max | IS 3025 (Part 10) | 1 | 5 | <1.0 | <1.0 | <1.0 | | <1.0 |
| 8 | Total Dissolved Solids mg/l Max | IS 3025 (Part 16) | 500 | 2000 | 86 | 490 | 276 | | 255 |
| 9 | Total Suspended Solids mg/l | IS 3025 (Part 17) | -- | -- | <2 | <2 | <2 | | <2 |
| 10 | Total Hardness (as CaCO ₃) mg/l Max | IS 3025 (Part 21) | 200 | 500 | 60 | 180 | 165 | | 170 |
| 11 | Chloride as Cl (mg/l) mg/l Max | IS 3025 (Part 32) | 250 | 1000 | 18 | 124 | 48 | | 30 |
| 12 | Nitrates (as NO ₃) mg/l Max | IS 3025 (Part 34) | 45 | 45 | 1.0 | 18.9 | 4.5 | | 6.3 |
| 13 | Nitrite (as NO ₂) mg/l | IS 3025 (Part 34) | -- | -- | <0.01 | <0.01 | <0.01 | | <0.01 |
| 14 | Alkalinity (as CaCO ₃) mg/l Max | IS 3025 (Part 23) | 200 | 500 | 48 | 160 | 110 | | 140 |
| 15 | Dissolved Oxygen (as O ₂) | IS 3025 (Part 36) | -- | -- | 4.9 | 4.8 | 5.1 | Dry | 5.4 |
| 16 | Sulphates (as SO ₄) mg/l Max | IS 3025 (Part 24) | 200 | 400 | 14.0 | 28.0 | 76.2 | | 55.3 |
| 17 | Phosphate (as PO ₄) mg/l | IS 3025 (Part 31) | -- | -- | 0.06 | <0.05 | <0.05 | | <0.05 |
| 18 | Acidity (as CaCO ₃) mg/l | IS 3025 (Part 22) | -- | -- | <2 | <2 | <2 | | <2 |
| 19 | Fluoride (as F) mg/l Max | IS 3025 (Part 60) | 1 | 1.5 | <0.1 | <0.1 | <0.1 | | <0.1 |
| 20 | Cadmium (as Cd) mg/l Max | IS 3025 (Part 41) | 0.003 | 0.003 | <0.002 | <0.002 | <0.002 | | <0.002 |
| 21 | Iron (as Fe) mg/l Max | IS 3025 (Part 53) | 1.0 | 1.0 | <0.05 | <0.05 | <0.05 | | <0.05 |
| 22 | Lead (as Pb) mg/l Max | IS 3025 (Part 47) | 0.01 | 0.01 | <0.005 | <0.005 | <0.005 | | <0.005 |
| 23 | Manganese (as Mn) mg/l Max | IS 3025 (Part 59) | 0.1 | 0.3 | <0.03 | <0.03 | <0.03 | | <0.03 |
| 24 | Arsenic (as As) mg/l Max | IS 3025 (Part 37) | 0.05 | 0.05 | <0.002 | <0.002 | <0.002 | | <0.002 |
| 25 | Zinc (as Zn) mg/l Max | IS 3025 (Part 49) | 5 | 15 | <0.005 | <0.005 | <0.005 | | <0.005 |
| 26 | Cobalt (as Co) mg/l | APHA 22 nd Edition | -- | -- | <0.01 | <0.01 | <0.01 | | <0.01 |
| 27 | Nickel (as Ni) mg/l Max | IS 3025 (Part 54) | 0.02 | 0.02 | <0.01 | <0.01 | <0.01 | | <0.01 |
| 28 | Copper (as Cu) mg/l Max | IS 3025 (Part 42) | 0.05 | 1.5 | <0.01 | <0.01 | <0.01 | | <0.01 |
| 29 | Chromium (as Cr ⁶⁺) mg/l Max | IS 3025 (Part 52) | 0.05 | 0.05 | <0.02 | <0.02 | <0.02 | | <0.02 |

SAMPLE CODE : TW1 - Test well - 1 TW2 - Test well - 2 TW3 - Test well - 3 TW4 - Test well - 4 TW5 - Test well - 5

Samples Collected & Analysed : Mineral Engineering Services, Ballari

(M.R. DURGA PRASAD)
GOVT. ANALYST

(M.S. RAJU)
HEAD OF LABORATORY

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Website : www.envtest.in



MINERAL ENGINEERING SERVICES

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Table No. 1

TEST REPORT OF AMBIENT AIR QUALITY

MES/IAQ/TR/06/00

Name of the Project : Malco Energy Limited, (Represented by Shri. Sumit Gupta)
Plot No. L-15/19/20, Cuncolim Industrial Estate, Cuncolim, Salcete Goa
Station at & Code : A1 - Behind Nickel Plant
Duration : 24 Hrs
Date of Report : 14.05.2022
Reference IS 5182 Report No : MES/SS/ARN/253

| Date of Sampling | Sulphur Dioxide (SO ₂), µg/m ³ | Nitrogen Dioxide (NO ₂), µg/m ³ | PM ₁₀ , (µg/m ³) | PM _{2.5} , (µg/m ³) | Ammonia (NH ₃), µg/m ³ | Benzene (C ₆ H ₆), µg/m ³ |
|---|---|--|---|--|---|---|
| 04.05.2022 | 16 | 23 | 51 | 35 | <20 | <1 |
| Limits for Industrial, Residential, Rural and other Areas | 60 24 Hrs | 80 24 Hrs | 100 24 Hrs | 60 24 Hrs | 400 24 Hrs | 5 Annual |

| Date of Sampling | Lead (Pb), µg/m ³ | Nickel (Ni), ng/m ³ | Arsenic (As), ng/m ³ | Benzo(a) Pyrene (BaP), ng/m ³ | Carbon Monoxide* (CO), mg/m ³ | Ozone* (O ₃), µg/m ³ |
|---|------------------------------|--------------------------------|---------------------------------|--|--|---|
| 04.05.2022 | 0.13 | <0.5 | <0.5 | <0.5 | 0.18 | 24 |
| Limits for Industrial, Residential, Rural and other Areas | 1.0 24 Hrs | 20 Annual | 6 Annual | 1 Annual | 4 1 Hr | 160 1 Hr |

Note : * Parameters monitored for period of 1 hr


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Table No. 2

TEST REPORT OF AMBIENT AIR QUALITY

MES/AQ/TR/06/00

Name of the Project : Malco Energy Limited, (Represented by Shri. Sumit Gupta)
Plot No. L-15/19/20, Cuncolim Industrial Estate, Cuncolim, Salcete Goa
Station at & Code : A2 - Near Crystallization & Evaporation
Duration : 24 Hrs
Date of Report : 14.05.2022
Reference IS 5182 Report No : MES/SS/ARN/254

| Date of Sampling | Sulphur Dioxide (SO ₂), µg/m ³ | Nitrogen Dioxide (NO ₂), µg/m ³ | PM ₁₀ , (µg/m ³) | PM _{2.5} , (µg/m ³) | Ammonia (NH ₃), µg/m ³ | Benzene (C ₆ H ₆), µg/m ³ |
|---|---|--|---|--|---|---|
| 04.05.2022 | 14 | 18 | 54 | 30 | <20 | <1 |
| Limits for Industrial, Residential, Rural and other Areas | 80 24 Hrs | 80 24 Hrs | 100 24 Hrs | 60 24 Hrs | 400 24 Hrs | 5 Annual |

| Date of Sampling | Lead (Pb), µg/m ³ | Nickel (Ni), ng/m ³ | Arsenic (As), ng/m ³ | Benzo(a) Pyrene (BaP), ng/m ³ | Carbon Monoxide* (CO), mg/m ³ | Ozone* (O ₃), µg/m ³ |
|---|------------------------------|--------------------------------|---------------------------------|--|--|---|
| 04.05.2022 | 0.07 | <0.5 | <0.5 | <0.5 | 0.15 | 0.26 |
| Limits for Industrial, Residential, Rural and other Areas | 1.0 24 Hrs | 20 Annual | 6 Annual | 1 Annual | 4 1 Hr | 180 1 Hr |

Note : * Parameters monitored for period of 1 hr


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Table No. 3

TEST REPORT OF AMBIENT AIR QUALITY

MES/AQ/TR/06/00

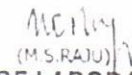
Name of the Project : Malco Energy Limited, (Represented by Shri. Sumit Gupta)
Plot No. L-15/19/20, Cuncolim Industrial Estate, Cuncolim, Salcete Goa
Station at & Code : A3 - Near Main Gate
Duration : 24 Hrs
Date of Report : 14.05.2022
Reference IS 5182
Report No : MES/SS/ARN/255

| Date of Sampling | Sulphur Dioxide (SO ₂), µg/m ³ | Nitrogen Dioxide (NO ₂), µg/m ³ | PM ₁₀ (µg/m ³) | PM _{2.5} (µg/m ³) | Ammonia (NH ₃), µg/m ³ | Benzene (C ₆ H ₆), µg/m ³ |
|---|---|--|---------------------------------------|--|---|---|
| 04.05.2022 | 16 | 22 | 59 | 30 | <20 | <1 |
| Limits for Industrial, Residential, Rural and other Areas | 80 24 Hrs | 80 24 Hrs | 100 24 Hrs | 60 24 Hrs | 400 24 Hrs | 5 Annual |

| Date of Sampling | Lead (Pb), µg/m ³ | Nickel (Ni), ng/m ³ | Arsenic (As), ng/m ³ | Benzo(a) Pyrene (BaP), ng/m ³ | Carbon Monoxide* (CO), mg/m ³ | Ozone* (O ₃), µg/m ³ |
|---|------------------------------|--------------------------------|---------------------------------|--|--|---|
| 04.05.2022 | 0.09 | <0.5 | <0.5 | <0.5 | 0.17 | 0.32 |
| Limits for Industrial, Residential, Rural and other Areas | 1.0 24 Hrs | 20 Annual | 6 Annual | 1 Annual | 4 1 Hr | 180 1 Hr |

Note : * Parameters monitored for period of 1 hr


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Table No. 6

SOIL TEST REPORT

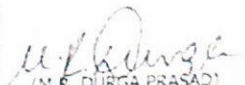
IES/SOIL/FTR/03/0

Project : Malco Energy Limited, (Represented by Shri. Sumit Gupta)
Plot No. L-15/19/20, Cuncolim Industrial Estate, Cuncolim, Salcete Goa

Date of samples : 04.05.2022
Date of Report : 14.05.2022
Report No : MES/S/SRN/22-15

| SL. | PARAMETERS | Units | S1 | S2 | S3 | S4 | S5 |
|-----|--------------------------------|------------|-------|-------|-------|-------|-------|
| 1 | pH | -- | 7.02 | 7.11 | 7.10 | 7.23 | 7.08 |
| 2 | Residual, Free Chlorine | mg/kg | <1 | <1 | <1 | <1 | <1 |
| 3 | Chloride | % | 0.08 | 0.082 | 0.25 | 0.23 | 0.16 |
| 4 | Sulphate | % | 0.052 | 0.053 | 0.033 | 0.39 | 0.048 |
| 5 | Phosphate | Ka/Ha | 43 | 46 | 46 | 41.00 | 59 |
| 6 | Nitrates as NO ₃ -N | mg/kg | 5.6 | 5.96 | 4.3 | 4.20 | 6.6 |
| 7 | Exchangeable Magnesium | Ka/Ha | 15.63 | 15.19 | 14.59 | 13.78 | 15.88 |
| 8 | Arsenic as As) | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 9 | Cadmium as Cd | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 10 | Total Chromium as Cr | mg/kg | 0.8 | 0.6 | 0.6 | 0.95 | 0.68 |
| 11 | Copper as Cu | mg/kg | 0.11 | 0.12 | 0.12 | 0.16 | 0.15 |
| 12 | Cobalt as Co | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 13 | Iron as Fe | (%) | 3.96 | 3.96 | 4.96 | 3.87 | 3.26 |
| 14 | Lead as Pb | % | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| 15 | Manganese as Mn | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 16 | Mercury as Hg | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| 17 | Nickel as Ni | mg/kg | 0.10 | 0.10 | 0.10 | 0.11 | 0.10 |
| 18 | Potassium as K ₂ O | Kg/Ha | 15.6 | 14.7 | 13.5 | 14.78 | 17.4 |
| 19 | Sodium | meq/100 gm | 1.580 | 1.650 | 1.800 | 1.82 | 1.263 |
| 20 | Zinc as Zn | mg/kg | 0.08 | 0.09 | 0.06 | 0.09 | 0.07 |

Sample Code
S1 Surface Soil Near Eastern boundary
S2 Sub Soil Near Eastern boundary
S3 Surface Soil Near western boundary
S4 Sub Soil Near western boundary
S5 Surface Soil Out side Eastern boundary


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Table No. 7

SOIL TEST REPORT

1ES/SOIL/FTR/03/0


Project : Malco Energy Limited, (Represented by Shri. Sumit Gupta)
Plot No. L-15/19/20, Cuncolim Industrial Estate , Cuncolim, Salcete Goa

Date of samples : 04.05.2022
Date of Report : 14.05.2022
Report No : MES/S/SPN/22-16

| SL. | PARAMETERS | Units | S6 | S7 | S8 | S9 | S10 |
|-----|--------------------------------|------------|-------|-------|-------|-------|-------|
| 1 | pH | -- | 7.45 | 7.12 | 7.32 | 7.15 | 7.32 |
| 2 | Residual, Free Chlorine | mg/kg | <1 | <1 | <1 | <1 | <1 |
| 3 | Chloride | % | 0.21 | 0.22 | 0.33 | 0.22 | 0.28 |
| 4 | Sulphate | % | 0.220 | 0.035 | 0.029 | 0.035 | 0.028 |
| 5 | Phosphate | Ka/Ha | 45 | 42 | 47 | 40 | 41 |
| 6 | Nitrates as NO ₃ -N | mg/Kg | 7.62 | 7.4 | 7.98 | 8.6 | 9.21 |
| 7 | Exchangeable Magnesium | Ka/Ha | 17.43 | 17.52 | 15.87 | 16.2 | 15.87 |
| 8 | Arsenic as As) | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 9 | Cadmium as Cd | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 10 | Total Chromium as Cr | mg/kg | 0.85 | 0.96 | 0.96 | 1.05 | 1.08 |
| 11 | Copper as Cu | mg/kg | 0.19 | 0.13 | 0.13 | 0.08 | 0.09 |
| 12 | Cobalt as Co | | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 13 | Iron as Fe | (%) | 3.56 | 3.45 | 3.45 | 3.18 | 3.2 |
| 14 | Lead as Pb | % | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| 15 | Manganese as Mn | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 16 | Mercury as Hg | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| 17 | Nickel as Ni | mg/kg | 0.14 | 0.15 | 0.15 | 0.15 | 0.17 |
| 18 | Potassium as K ₂ O | Kg/Ha | 15.34 | 16.5 | 16.5 | 14.2 | 15.9 |
| 19 | Sodium | meq/100 gm | 1.765 | 1.555 | 1.555 | 1.862 | 1.872 |
| 20 | Zinc as Zn | mg/kg | 0.076 | 0.08 | 0.045 | 0.11 | 0.12 |

Sample Code :

- S6 Sub Soil Out side Eastern boundary
- S7 Surface Soil Out side western boundary
- S8 Sub Soil Out side western boundary
- S9 Surface Soil Plot M - 11
- S10 Sub Soil Plot M - 11


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Table No. 5

NOISE LEVEL DATA

MES/N/TR/02/00

| Project | : Malco Energy Limited, (Represented by Shri. Sumit Gupta) Plot No. L - 15/19/20, Cuncolim Industrial Estate , Cuncolim, Salcete Goa | | | | | | |
|--|---|------------------|-----------------|------------------|------------------|-----------------|------------------|
| Date of monitoring | : 04.05.2022 | | | | | | |
| Date of Report | : 14.05.2022 | | | | | | |
| Report No | : MES/NR/62 | | | | | | |
| Code No. | Monitoring stations | Day | | | Night | | |
| | | L _{min} | L _{eq} | L _{max} | L _{min} | L _{eq} | L _{max} |
| Core Zone | | | | | | | |
| N1 | Behind Nickel Plant | 43.2 | 51.8 | 54.8 | 34.0 | 42.8 | 46.0 |
| N2 | Near Crystallization & Evaporation | 43.0 | 48.5 | 52.3 | 34.0 | 40.8 | 44.0 |
| N3 | Near Main Gate | 43.0 | 47.7 | 51.0 | 35.0 | 41.7 | 47.0 |
| N4 | Near Temple (west side) | 38.4 | 47.1 | 50.0 | 34.0 | 40.2 | 45.0 |
| <u>Permissible Limits of Ambient Noise Levels</u> <u>as per CPCB Guidelines</u> | | | | | | | |
| | | Leq. Limit dB(A) | | | | | |
| | | Day | Night | | | | |
| Industrial Area | | 75 | 70 | | | | |
| Commercial Area | | 65 | 55 | | | | |
| Residential Area | | 55 | 45 | | | | |
| Silence Zone | | 50 | 40 | | | | |

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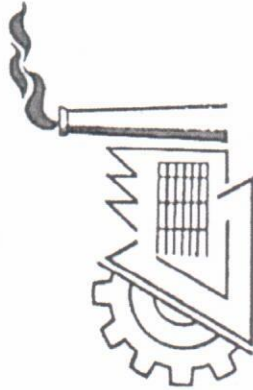
Certificate of Membership

This is to certify that

ALCO ENERGY LIMITED
is the member of the [NICOMET]

Goa Industries Environment Management Association

Reg. No.: 66/Goa/2007



Membership No.: 41/2007-08 Date: 03/07/2007

K.V.S.

K.V.S. Krishnakumar
President

A.J. D'Souza

A.J. D'Souza
Treasurer

CREP recommendations and compliance status

| Sr. No. | Issue | Status of Action Taken |
|----------------|---|---|
| 1 | Waste minimization Waste minimization measures and for adoption of clean technologies. | Waste minimization circles has been formed to implement waste minimization measures and for adoption of clean technologies. |
| 2 | Reduction of Water Consumption | Water flow meters installed to measure actual consumption. Awareness training given to the employees for water conservation and minimization of consumption |
| 3 | Compliance of Standards Monitoring of Compliance status of the Industry | Employed qualified and well trained staff for O & M of the facility. Monitoring pollution loads in core areas. Separate Energy meters provided for the operating facilities. Periodic monitoring of health & safety of workers in the industry are carried out |
| 4 | Waste water treatment & reuse Adopted Wastewater treatment & reuse | Process water generated is treated by triple effect evaporation under vacuum. The treated water will come out as condensate and reused in the main process stream. |
| 5 | Bye-product recovery in the form of Sodium Sulphate | Sodium Sulphate crystals is recovered as a by-product from evaporation of waste water |
| 6 | Ambient Air Quality Standards Maintenance of ambient air quality keeping health aspects in view which is applicable to the hydro-metallurgical industries | Since there are no equipments like blast furnace or other highly polluting machineries in the factory, emission levels are too low. It is monitored by MoEF recognized agency and report submitted to GSPCB every month |
| 7 | Noise Standards Maintenance of Cost effective engineering and administrative measures in keeping health aspects which is applicable to the hydro-metallurgical industries | Occupational noise standards have already been developed keeping health aspects in view which is applicable to the hydro-metallurgical industries. Noise control measures implemented in high noise area. Acoustic room provided for DG set. Personnel Protective Equipments like Ear Plugs/Ear Muffs are provided for employees as per requirement. Periodic monitoring of noise level done in factory premises. |
| 8 | Solid Waste Management a) Management plan of solid / hazardous waste | Process residue generated is disposed off in secured land fill after neutralization and stabilization |
| | b) Waste management in the process | Process residue after extracting maximum metallic values is stabilized with lime and disposed in secured land fill. Liquid waste which is lean Sodium Sulphate solution is evaporated and converted into Sodium Sulphate crystals which is sold as a byproduct. Condensate is recycled back to the process |

| | | |
|----|--|---|
| 9 | Utilization of Waste Maximize the reuse of waste and exploring alternative uses of wastes | Waste oil and used oil are being sold to authorized re-users/ recyclers registered with MoEF / CPCB. Sodium sulphate solution generated from SX plant is processed in triple effect evaporation plant to separate out sodium sulphate salt in the form of anhydrous crystals. Condensate is recycled back in the process. |
| 10 | Disposal Management of wastes generated from the proposed as well as existing plant operative process belong to stockpiled waste cake. | Stock piled waste residue has already processed, stabilized and disposed off in secured land fill. No more stock piled residues left. Process residue generated from current operation is stabilized with lime after extracting maximum metallic values and disposed off in secured land fill after stabilization. |
| 11 | Action Plan to Control and Monitor Secondary Figurative Emissions from the source | Manual water sprinkling through pipes is done to control fugitive emissions |
| 12 | Environmental Management Plan during Operation Air Pollution sources from the process | Stack monitoring for boiler and DG is done periodically by MoEF recognized Laboratory and report submitted to GSPCB on regular basis. Ambient air monitoring is done periodically by MoEF recognized Laboratory and report submitted to GSPCB |
| 13 | Control of Particulate Emissions Minimization of the fugitive losses within the process areas | Proper ventilation systems provided for minimizing the fugitive losses within the process areas. Manual water sprinkling through pipes is done to control fugitive emissions |
| 14 | Control of Fugitive Emissions Manufacturing units, Waste heaps (Dust),Dust Emissions due to Vehicular Movement | Turbo ventilators provided for better ventilation. <ul style="list-style-type: none"> • Man coolers provided in process area • Sprinkling of Water through pipes done to minimize dust emissions |
| 15 | Stack Gas Monitoring Monitoring of stack gas emissions from the sources | The emissions from the stacks monitored by MoEF recognized agency and report submitted to GSPCB periodically. |
| 16 | Ambient Air Quality Monitoring Monitoring of Ambient Air Quality in different locations | Ambient air quality in different locations monitored by MoEF recognized Laboratory and report submitted to GSPCB every month |
| 17 | House keeping Control of fugitive dust emissions | To reduce the generation of fugitive dust from vehicle movement and improve overall house-keeping, water sprinkling done through pipes |
| 18 | Green Belt Canopy based green belt around the periphery of plant | Green belt development done in 2256 square metre area. Further development in progress |



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S1, S2 & S5, Kamat Commercial, Above Women's Look,
Martires Dias Road, Near Hari Mandir, Margao, Salcete, Goa - 403 601.
Ph.: 2711140 E-mail : medicalsdvine@yahoo.com




01ST APRIL 2022

TO WHOMSO EVER IT MAY CONCERN

This is to certify that I, Dr. Phillip Mascarenhas, have performed Pre-Employment Medical examination of VEDANTA of MR. DAMODAR GOVIND GAONKAR On 01ST APRIL 2022 according to Factories Act 1948 .

The Employee is FIT For Work.




Dr. Phillip Mascarenhas
MBBS, DNB (Med), AFIH
Occupation Health Physician
DIVINE MEDICAL CENTRE, GMC Reg. No. 1458
DGFASLI Reg. No: 1097
Margão - Goa



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Martires Dias Road, Near Hari Mandir, Margao, Salcete, Goa - 403 601.
Ph.: 2711140 E-mail : medicalsdivine@yahoo.com



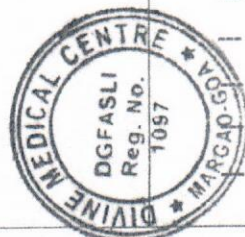
Pre-Employment Medical Examination

Record No. ---

| | |
|---------------------------------|-------------------------------|
| 1. Name: GAONKAR DAMODAR GOVIND | 2. Date: 01-Apr-2022 |
| 3. Address: CUNCOLIM INDIA | 4. Occupation: ELECTRICIAN |
| 5. Establishment: VEDANTA | 6. SEX: Male |
| 5. Age: 45 | |
| <u>PERSONAL HISTORY</u> | |
| A. 1. Smoking : NO | 2. Alcohol: NO |
| 3. Drug Addiction : NO | 4. Tobacco chewing: NO |
| B. MARITAL STATUS : MARRIED | 5. IDENTIFICATION MARK: NA |

C. PERSONAL HISTORY & FAMILY HISTORY: NIL

| DISEASE | FATHER | MOTHER | OTHERS |
|-------------------------------|--------|--------|--------|
| 1. Heart Disease/Hypertension | --- | --- | --- |
| 2. Diabetes Mellitus | --- | --- | --- |
| 3. Tuberculosis | --- | --- | --- |
| 4. Bronchial Asthma/COPD | --- | --- | --- |
| 5. Epilepsy | --- | --- | --- |
| 6. Arthritis | --- | --- | --- |
| 7. Cancer | --- | --- | --- |
| 8. Kidney Disorder | --- | --- | --- |
| 9. Liver Disease | --- | --- | --- |
| 10. Skin Disease | --- | --- | --- |
| 11. Allergies | --- | --- | --- |
| 12. Accidents / injuries | --- | --- | --- |
| 13. Surgeries | --- | --- | --- |





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Ph.: 2711140 E-mail : medicalsdvine@yahoo.com



CLINICAL EXAMINATION REPORT

| | |
|---|--|
| 1. General Appearance: Height : 160 Weight : 56.00 Waist : 83 CMS Hip : 92 CMS Height in CM-100 Expected Weight 60 | Teeth : NO CARIES Chest : 88-89 BMI : 21.88 Build : Normal |
| 2. Skin : HEALTHY ,NO INFECTION Nail: normal | |
| 3. Eyes Conjunctiva : Normal Pupil : normal | Cornea : Normal Phorias : Normal |
| 4. Ears Auditory Canal : Normal Hearing : Normal | Ear Drums: Normal |
| 5. Nose Septum : Normal | Nostril: Normal |
| 6. Mouth Tongue : Normal Palate : Normal Speech : Normal | Tonsils : Normal Teeth : Normal Pharynx : Normal |
| 7. Lymphatic & Endocrine Lymph. Nodes : Normal | Thyroid: Normal |
| 8. Respiratory System Chest : Normal Chest Exp/Ins : 88-89 Crepitations : NO Respiratory Rate : 18 /min | Sound : Normal Shape : Normal Ronchi: No |
| 9. Cardiovascular System Pulse : 72 Rhythm : Normal Thrills : ABSENT Murmurs : Absent | Blood Pressure : 130-90 Heart sounds : Normal Peri Vessels : Normal Heart Size : Normal |





DIVINE MEDICAL CENTRE

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10. Abdomen

Kidney : Not Palpable
Spleen : Not Palpable

Liver : Not Palpable
Any lump/Masses: Not Palpable

11. Genito- Urinary

Inguninal Hernia : Nil
Hydrocele : Nil
Phimosis: Nil

Ext. Genitalia : Nil
Discharge /V.D : Nil

12. Musculoskelatal

Posture: Normal
Bones : Normal

Spines: Normal
Joints : Normal

13. Nervous System

Cranial Nerves : Normal
Sensory System : Normal

Motor System: Normal
Reflexes : Normal

Special observation, if any or Evidence of any operation : No Deformity ,injury or accident

VISION TESTING :

Corrected : 0 Uncorrected: YES

Near Vision : N6

Far Vision : Right Eye- 20/20

 Left eye- 20/20

 Bilateral- Normal

Phorias : No

Colour blindness: no
Field of Vision: Normal

Stereo Depth : Normal





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29th JUNE 2022

TO WHOMSO EVER IT MAY CONCERN

This is to certify that I, Dr. Phillip Mascarenhas, have performed Pre - Employment Medical examination of VEDANTA of MR. SANJAY ASHOK GURAV On 29TH JUNE 2022 according to Factories Act 1948 .

The Employee is FIT For Work.


Dr. Phillip Mascarenhas
MBBS, DNB (Med), APIH
Occupation Health Physician
DIVINE MEDICAL CENTRE, GMC Reg. No. 1458
DGFASLI Reg. No: 1097
Margao - Goa





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Pre-Employment Medical Examination

Record No. ---

| | |
|-----------------------------|-------------------------------|
| 1. Name: GURAV SANJAY ASHOK | 2. Date: 29-Jun-2022 |
| 3. Address: CUNCOLIM INDIA | 4. Occupation: |
| 5. Establishment: VEDANTA | 6. SEX: Male |
| 5. Age: 34 | |
| <u>PERSONAL HISTORY</u> | |
| A. 1. Smoking : NO | 2. Alcohol: NO |
| 3. Drug Addiction : NO | 4. Tobacco chewing: NO |
| B. MARITAL STATUS : MARRIED | 5. IDENTIFICATION MARK: NA |

C. PERSONAL HISTORY & FAMILY HISTORY: NIL

| DISEASE | FATHER | MOTHER | OTHERS |
|-------------------------------|--------|--------|--------|
| 1. Heart Disease/Hypertension | --- | --- | --- |
| 2. Diabetes Mellitus | --- | --- | --- |
| 3. Tuberculosis | --- | --- | --- |
| 4. Bronchial Asthma/COPD | --- | --- | --- |
| 5. Epilepsy | --- | --- | --- |
| 6. Arthritis | --- | --- | --- |
| 7. Cancer | --- | --- | --- |
| 8. Kidney Disorder | --- | --- | --- |
| 9. Liver Disease | --- | --- | --- |
| 10. Skin Disease | --- | --- | --- |
| 11. Allergies | --- | --- | --- |
| 12. Accidents / injuries | --- | --- | --- |
| 13. Surgeries | --- | --- | --- |





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ISO 9001: 2015
Reg. No RQ91/6643

CLINICAL EXAMINATION REPORT

| | |
|---|--|
| 1. General Appearance: Height : 158 Weight : 62.00 Waist : 88 CMS Hip : 93 CMS Height in CM-100 Expected Weight 58 | Teeth : NO CARIES Chest : 88-93 BMI : 24.84 Build : Normal |
| 2. Skin : HEALTHY ,NO INFECTION Nail : normal | |
| 3. Eyes Conjunctiva : Normal Pupil : normal | Cornea : Normal Phorias : Normal |
| 4. Ears Auditory Canal : Normal Hearing : Normal | Ear Drums : Normal |
| 5. Nose Septum : Normal | Nostril : Normal |
| 6. Mouth Tongue : Normal Palate : Normal Speech : Normal | Tonsils : Normal Teeth : Normal Pharynx : Normal |
| 7. Lymphatic & Endocrine Lymph. Nodes : Normal | Thyroid : Normal |
| 8. Respiratory System Chest : Normal Chest Exp/Ins : 88-93 Crepitations : NO Respiratory Rate : 18 /min | Sound : Normal Shape : Normal Ronchi : No |
| 9. Cardiovascular System Pulse : 72 Rhythm : Normal Thrills : ABSENT Murmurs : Absent | Blood Pressure : 110-70 Heart sounds : Normal Peri Vessels : Normal Heart Size : Normal |





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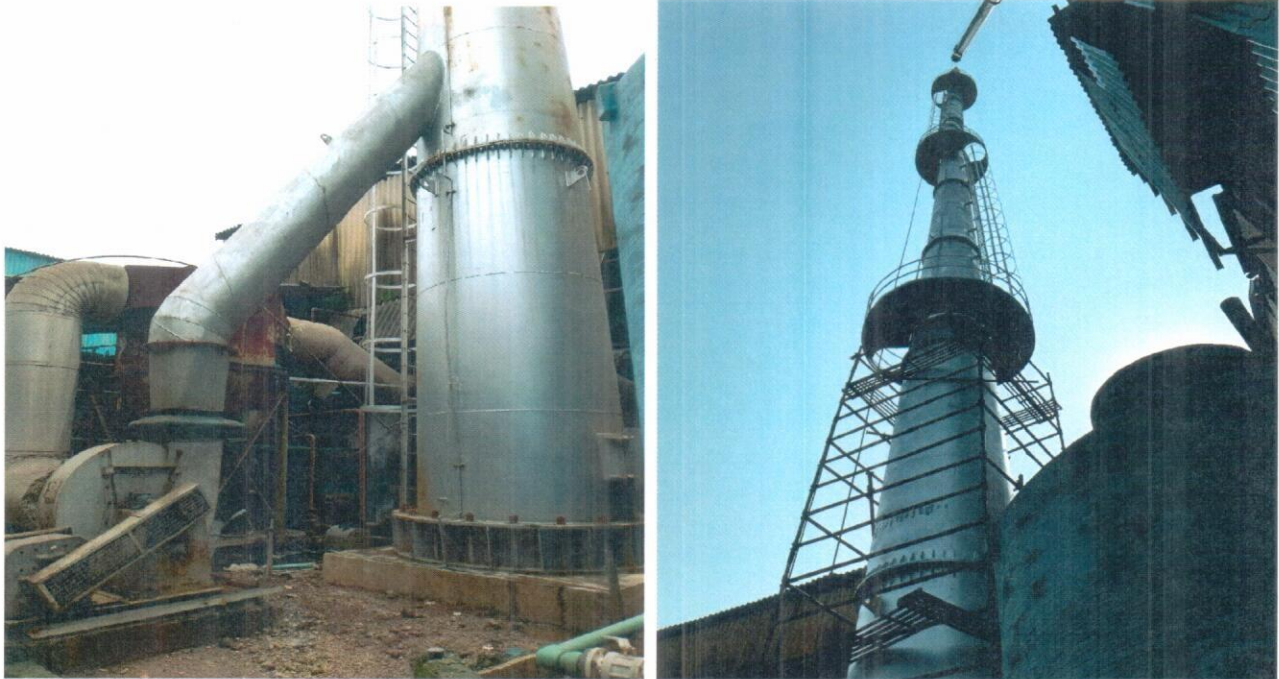


| | |
|---|---|
| 10. Abdomen Kidney : Not Palpable Spleen : Not Palpable | Liver : Not Palpable Any lump/Masses: Not Palpable |
| 11. Genito- Urinary Inguninal Hernia : Nil Hydrocele : Nil Phimosis: Nil | Ext. Genitalia : Nil Discharge /V.D : Nil |
| 12. Musculoskelatal Posture: Normal Bones : Normal | Spines: Normal Joints : Normal |
| 13. Nervous System Cranial Nerves : Normal Sensory System : Normal | Motor System: Normal Reflexes : Normal |
| Special observation, if any or Evidence of any operation : No Deformity ,injury or accident | |

| | |
|---|--|
| VISION TESTING : Corrected : 0 Uncorrected: YES Near Vision : N6 Far Vision : Right Eye- 20/20 Left eye- 20/20 Bilateral- Normal Phorias : No | Colour blindness: no Field of Vision: Normal Stereo Depth : Normal |
|---|--|



Boiler Chimney



Sodium Sulphate Evaporation Plant for Process water treatment



Industry shed

Before



After



Repaired Reactor

