



सत्यमेव जयते

File No: 475023/32-INFRA2/05-2024

Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment
Authority(SEIAA), ODISHA)



Dated 15/07/2024



To,

Sri.Satyendra Kumar,Authorized Signatory
M/s Calderys India Refractories Ltd.
Fidvi Tower, 6th Floor, opposite Saraf Chambers, Mount Road, Sadar, Nagpur, Maharashtra- 440001,
NAGPUR, MAHARASHTRA, 440001
calderysindia2024@gmail.com

Subject: Grant of EC under the provision of the EIA Notification 2006-regarding.

Sir/Madam,

This is in reference to your application for Grant of EC under the provision of the EIA Notification 2006-regarding in respect of project Refractory Manufacturing Plant by M/s Calderys India Refractories Limited submitted to Ministry vide proposal number SIA/OR/INFRA2/475023/2024 dated 24/05/2024.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC24C3803OR5338998N
(ii) File No.	475023/32-INFRA2/05-2024
(iii) Clearance Type	EC
(iv) Category	B2
(v) Project/Activity Included Schedule No.	8(a) Building / Construction
(vii) Name of Project	Refractory Manufacturing Plant by M/s Calderys India Refractories Limited
(viii) Name of Company/Organization	M/s. Calderys India Refractories Ltd
(ix) Location of Project (District, State)	Village-Bhuinpur, Tahasil--Begunia, District-Khordha
(x) Issuing Authority	SEIAA,Odisha
(xii) Applicability of General Conditions	no
(xiii) Applicability of Specific Conditions	no

3. In view of the particulars given in the Para 1 above, the project proposal interalia including Form-1(Part A and B) were submitted to the SEIAA, Odisha for an appraisal by the State Level Expert Appraisal Committee(SEAC) under the

provision of EIA notification 2006 and its subsequent amendments thereto.

4. The above-mentioned proposal has been considered by SEAC in its meeting held on 04.06.2024. The minutes of the meeting and all the project documents are available on Parivesh portal which can be accessed from the Parivesh portal by scanning the QR Code above.
5. The details of the project along with the brief on the salient features of the project as submitted by the project proponent in Form- 1 (Part A and B)and as presented before SEAC are annexed to this EC as Annexure- 2.
6. The PP has submitted the EC application under item no. 8(a)- 'Building & Construction Projects' in the schedule of EIA Notification, 2006 as amended time to time, and the Industrial shed project falls under Category B2 as the built-up area of the Industrial shed is $\geq 20,000$ Sqmt and $< 1,50,000$ Sqmt and it is housing a Refractory Manufacturing Plant.
7. The SEAC, after detailed deliberations made by the Project Proponent and the EIA Consultant, in its meeting held on 04.06.2024 under the provisions of EIA Notification 2006 and its subsequent amendments, recommended the proposal for grant of Environmental Clearance (EC) for the project valid for a period of 10 years, stipulating various conditions.
8. The matter was again examined in the State Environment Impact Assessment Authority (SEIAA), Odisha in its 170th meeting held on 03.07.2024 & 04.07.2024, recommendation of SEAC and in accordance with the EIA Notification, 2006 and further amendments thereto. After detailed deliberation in the matter, the Authority decided to grant EC with usual stipulated conditions as applicable for building and construction project along with SEAC recommended specific conditions.
9. Environmental Clearance (EC) is granted to the project valid for a period of 10 years under the provisions of EIA Notification No. S.O. 1533 (E) dated the 14th September, 2006 of the Government of India in the erstwhile Ministry of Environment and Forests, as amended from time to time for proposed Construction of "Refractory Manufacturing Plant" Over an area of 1,61,950.46 Sqmt.(40 Acres) with total Built-up area of 57,826.87 Sqmt. located in Village-Bhuniapur, Tahasil--Begunia, District-Khordha by M/s. Calderys India Refractories Ltd. " with the following stipulations, environmental conditions and safeguards as given in Annexure- 1
10. The SEIAA, Odisha reserves the right to alter /modify the above conditions or stipulate any further condition in the interest of environment protection.
11. The EC to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.
12. The PP is under obligation to implement commitments made in the Environment Management Plan, which forms part of this EC.
13. This issues with the approval of the Competent Authority.

Copy To

1. **Joint Secretary (IA Division)**, Ministry of Environment, Forests and Climate Change Govt. of India, Indira Paryavaran Bhavan, Jor Bagh Road, Aliganj, New Delhi-110003 for information.
2. **Additional Chief Secretary**, Forests & Environment Dept., Government of Odisha for information.
3. **Secretary**, SEAC, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar for information.
4. Guard file for record/Website/Parivesh Portal.

Copy for information and necessary action:

1. **Member Secretary**, State Pollution Control Board, Odisha, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-8, Bhubaneswar.
2. **Deputy D.G.Forest**, Integrated Regional Office (IRO), Ministry of Environment & Forests, A/3, Chandrasekharapur, Bhubaneswar.
3. **Regional Director**, CGWA, South Eastern Region, Bhujal Bhawan, Khandagiri, Bhubaneswar, Pin-751030.
4. **Managing Director**, IDCO, IDCO Tower, Janpath, Bhubaneswar – 751022.

Standard EC Conditions for (Building / Construction)

1. Statutory Compliance

S. No	EC Conditions
1.1	The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
1.2	The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.
1.3	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
1.4	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
1.5	The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
1.6	The project proponent shall obtain the necessary permission for drawl of ground water / surface water required for the project from the competent authority.
1.7	A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
1.8	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable, by project proponents from the respective competent authorities.
1.9	The provisions of the Solid Waste Management Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste Management Rules, 2016, shall be followed.
1.10	The project proponent shall follow the ECBC/ECBC-R prescribed by Bureau of Energy Efficiency, Ministry of Power strictly.

2. Air Quality Monitoring And Preservation

S. No	EC Conditions
2.1	Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.

S. No	EC Conditions
2.2	A management plan shall be drawn up and implemented to contain the current exceedance in ambient air quality at the site.
2.3	The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5) covering upwind and downwind directions during the construction period.
2.4	Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.
2.5	Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3-meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murrum and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site.
2.6	Sand, murrum, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution.
2.7	Wet jet shall be provided for grinding and stone cutting.
2.8	Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.
2.9	All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Management Rules 2016.
2.10	The diesel generator sets to be used during construction phase shall be low sulphur diesel type and shall conform to Environmental (Protection) prescribed for air and noise emission standards.
2.11	The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.
2.12	For indoor air quality the ventilation provisions as per National Building Code of India.

3. Water Quality Monitoring And Preservation

S. No	EC Conditions
3.1	The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape, and other sustainable urban drainage systems (SUDS)

S. No	EC Conditions
	are allowed for maintaining the drainage pattern and to harvest rain water.
3.2	Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
3.3	Total fresh water use shall not exceed the proposed requirement as provided in the project details. As proposed, for meeting the total fresh water requirement for the project upto maximum 92KLD(Total water requirement -217KLD(approx.) i.e. first time before recycle) from surface water source supplied from IDCO. Necessary prior permission has to be obtained from the Water Resources Department, Govt. of Odisha/ CGWB, if ground water is used as a source, as the case may be. The PP shall install tamper proof digital flow meter at all water drawal and intake points for the project
3.4	The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.
3.5	A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.
3.6	At least 20% of the open spaces as required by the local building bye-laws shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as pervious surface.
3.7	Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.
3.8	Use of water saving devices/fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc) for water conservation shall be incorporated in the building plan.
3.9	Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
3.10	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
3.11	The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits/storage tanks shall be provided for ground water recharging as per the CGWB norms.
3.12	A rain water harvesting plan needs to be designed where the recharge bores of minimum one recharge bore per 5,000 square meters of built up area and storage capacity of minimum one day of total fresh water requirement shall be provided. In areas where ground water recharge is not feasible, the rain water should be harvested and stored for reuse. The ground water shall not be

S. No	EC Conditions
	withdrawn without approval from the Competent Authority. As proposed, 95 nos. of rain water harvesting pits/ or structure, as the case may be, for artificial ground water recharge shall be installed as per CGWB guidelines.
3.13	All recharge should be limited to shallow aquifer.
3.14	No ground water shall be used during construction phase of the project.
3.15	Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering.
3.16	The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.
3.17	Sewage shall be treated in the STP with tertiary treatment. The treated effluent from STP shall be recycled/re-used for flushing, AC make up water and gardening. As proposed, no treated water shall be disposed in to municipal drain.
3.18	No sewage or untreated effluent water would be discharged through storm water drains.
3.19	STP of 50 KLD capacity and ETP of 5KLD capacity shall be installed before start of the operation phase of the building. Treatment of 100% grey water by decentralized treatment should be done. The treated waste water from STP and ETP shall be recycled / reused to the maximum extent possible. Flushing, washing, watering of the lawns and gardening, process recycle, cleaning of the floors, etc. facilities are to be met by recycled water. Discharge of unused treated waste water shall conform to the norms and standards of the Odisha State Pollution Control Board. Necessary measures should be taken to mitigate the odour problem from STP and ETP. The sewage treatment plant & ETP shall be made functional before the completion of Building Complex. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP & ETP.
3.20	Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.
3.21	Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.
3.22	The PP shall install one piezometer for ground water level monitoring and water level data shall be made available to CGWA through web portal as a part of six monthly compliance report. The PP shall comply with all conditions laid down in the NOC of CGWB.

4. Noise Monitoring And Prevention

S. No	EC Conditions
4.1	Ambient noise levels shall conform to residential area/commercial area/industrial area/silence zone

S. No	EC Conditions
	both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.
4.2	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
4.3	Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.

5. Energy Conservation Measures

S. No	EC Conditions
5.1	Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC.
5.2	Outdoor and common area lighting shall be LED.
5.3	Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.
5.4	Energy conservation measures like installation of CFLs/ LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning.
5.5	Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 1% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher.
5.6	Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.

6. Waste Management

S. No	EC Conditions
6.1	A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project shall be obtained.

S. No	EC Conditions
6.2	Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
6.3	Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials.
6.4	Organic waste compost/Vermiculture pit/Organic Waste Converter within the premises with a minimum capacity of 0.3 kg /person/day must be installed.
6.5	All non-biodegradable waste shall be handed over to authorized recyclers for which a written tie up must be done with the authorized recyclers.
6.6	Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
6.7	Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, Compressed earth blocks, and other environment friendly materials.
6.8	Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.
6.9	Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.
6.10	Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.

7. Green Cover

S. No	EC Conditions
7.1	No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).
7.2	A minimum of 1 tree for every 80 sqm of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping.
7.3	Where the trees need to be cut with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.

S. No	EC Conditions
7.4	Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.

8. Transport

S. No	EC Conditions
8.1	A comprehensive mobility plan, as per MoUD best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria. a. Hierarchy of roads with proper segregation of vehicular and pedestrian traffic. b. Traffic calming measures. c. Proper design of entry and exit points. d. Parking norms as per local regulation.
8.2	Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.
8.3	Parking shall be prohibited on the access road to the proposed project site.
8.4	Parking in terms of ECS & space, both for 4 wheelers / 2 wheelers for the project shall be provided as per the norms considering the residents and visitors in the project.
8.5	A buffer of minimum 10 m shall be maintained between the entry/exit gate and the road to avoid traffic congestion.

9.

S. No	EC Conditions
9.1	A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 01 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 01 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

10. Human Health Issues

S. No	EC Conditions
10.1	All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.

S. No	EC Conditions
10.2	For indoor air quality the ventilation provisions as per National Building Code of India.
10.3	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
10.4	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
10.5	Occupational health surveillance of the workers shall be done on a regular basis.
10.6	A First Aid Room shall be provided in the project both during construction and operations of the project.
10.7	Recommendations of mitigation measures from possible accident shall be implemented based on Risk Assessment studies conducted for worst case scenarios using latest techniques.

11. Miscellaneous

S. No	EC Conditions
11.1	The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the SEIAA, Odisha. The advertisement shall be made within Seven days from the date of receipt of the Clearance letter and a copy of the same shall be forwarded to the Regional Office of MoEF & CC, Bhubaneswar.
11.2	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad/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 website of the company by the proponent. The EC letter shall also be displayed at the Regional Office, District Industries center and Collector's Office/ Tahsildar's office for 30 days.
11.3	It shall be mandatory for the project management to submit six (06) monthly compliance reports on post environmental monitoring in respect of the stipulated terms and conditions in this Environmental Clearance to the State Environment Impact Assessment Authority (SEIAA), Odisha, SPCB & Integrated Regional Office of the Ministry of Environment & Forest, Odisha, the respective Zonal Office of CPCB and the SPCB in soft copies on 1 st June and 1 st December of each calendar year. No hard copy of six (06) monthly compliance reports shall be accepted by SEIAA. The proponent shall upload the compliance report including results of monitored data, as applicable in the Parivesh website of the Ministry for monitoring of EC Conditions, failing which EC is liable to be revoked. The criteria pollutant levels namely; SPM, RSPM, SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
11.4	The company shall have a well laid down environmental policy duly approved by the Board of

S. No	EC Conditions
	Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholders/stake holders. The copy of the board resolution in this regard shall be submitted to the Integrated Regional Office, MoEF&CC, Govt. of India, Bhubaneswar as well as SEIAA, Odisha as a part of six-monthly report.
11.5	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
11.6	Action plan for implementing EMP(as proposed) and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Integrated Regional Office, MoEF&CC, Govt. of India, Bhubaneswar as well as SEIAA, Odisha along with the Six Monthly Compliance Report.
11.7	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
11.8	The project proponent shall inform the Regional Office as well as the SEIAA,Odisha, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
11.9	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
11.10	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during their presentation to the SEAC.
11.11	No further expansion/revision or modifications in the project shall be carried out without prior approval of SEIAA, Odisha. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
11.12	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
11.13	The SEIAA, Odisha reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner. The company in a time bound manner shall implement these conditions.
11.14	Officials from the Integrated Regional Office of MoEF&CC, Bhubaneswar/SPCB, Odisha who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection.

S. No	EC Conditions
11.15	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
11.16	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

12. Specific Conditions

S. No	EC Conditions																								
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	<p>compostable waste.</p> <p>Ø Inorganic waste (inerts) to be disposed off through authorized vendor.</p> <p>Ø Maximum ambient noise level of 55dB to be maintained during construction.</p> <p>(h) Air Quality & Noise levels Ø DG Set of capacity 1 x 750 kVA + 1 x 750 kVA to be installed. Stack height to be provided as per norms of CPCB.</p> <p>(i) Energy Conservation Ø Solar power to be installed -193.6KW (5% minimum of total power required). Ø Flyash brick, AACs, other environmental friendly bricks & blocks to be used-20%</p> <p>(j) Traffic Circulation Ø Minimum width of the access road (right of way) shall be 15m-18m as height of building is between 15m-30m. Ø 14,487.74 Sqmt parking space to be provided with e-vehicle charging facility.(30% of parking to be reserved for EV charging i.e., 4,346.32Sqmt. as proposed)</p> <p>(k) Green Belt Development Ø 53,592.88 Sqmt. (33.06% of Plot area) to be raised before occupancy.</p> <p>(l) Disaster /Risk Management Plan Ø Firefighting system shall be provided as per the fire NOC.</p> <p>(m) Socio Economic & CSR Ø A First Aid Room, other facilities, etc to be provided as proposed in the project.</p> <p>(n) Environment Management Plan (EMP) Ø EMP cost: Rs. 189.95Lakhs as capital cost & Rs. 56.46Lakhs as recurring cost to be utilized each year.</p> <p>(o) Any other related parameter of the project Ø The Proponent before implementation of the project shall convert the land to industrial use and shall take the ownership of the land if not already taken.</p>
12.2	<p>Any change in the EC stipulations of the parameters above shall require prior approval of SEIAA. The PP is required to obtain amendment in EC before making any changes, failing which it will be construed as violation under Environment (P) Act,1986. The Project Proponent shall ensure submission of all permission/documents as applicable to the project for monitoring of compliance of EC conditions. These certificates/permission/documents should be submitted by the PP to SPCB, IDCO, SEIAA, Odisha and to the Integrated Regional Office of MoEF & CC, Govt. of India who can assess / evaluate / monitor the compliance of conditions of EC order of the project to ensure sustainable environmental management due to the proposed project.</p>
12.3	<p>The SPCB, Odisha shall ensure that there is no change in the project w.r.t. the EC stipulations mentioned against each 15 parameters before giving ‘Consent to Operate’ to this project and by the local urban bodies and the IDCO while giving the ‘Occupancy Certificate’ to this project.</p>
12.4	<p>The Proponent shall also obtain permission/NOC from Executive Engg. (PHD) and / or from the appropriate authority for disposal of excess STP treated water to the nearest drain, before start of</p>

S. No	EC Conditions
	construction work. Also, in case of the connecting drain passing through others land (Govt. or Private land), the Proponent shall obtain the permission and possession as the case may be.
12.5	Before starting the construction project, physical properties as well as engineering properties of the soil along with its bearing capacity should be undertaken and the report shall be submitted.
12.6	The project proponent shall adopt adequate pollution control measures to control dust emission as the materials used in whole process is powdered form.
12.7	The proponent shall abide by Traffic corridors layout as per Traffic Study Report.
12.8	Refractory wastes generated during processing shall be properly utilised or safely disposed.
12.9	Occupational health monitoring shall be taken up periodically.
12.10	Trees located within the project area, if any shall be transplanted alongside the boundary green development area. The project proponent must obtain permission from the concerned authority for cutting of trees at the project site, if applicable.
12.11	The proponent shall obtain permission from concerned Fire Safety Authority.
12.12	The project proponent shall maximise utilisation of treated water in flushing, plantations and ground washings etc. as per need to reduce water discharge to drain.
12.13	Specific Environmental Conditions and Safeguards Which Need to Be Complied With By the Project Proponent Before Breaking of Land- 1,12,11.1,11.2.
12.14	Specific Environmental Conditions and Safeguards Which Need to Be Complied With By the Project Proponent During Construction Phase- 1,2,4.1,9,11.3,12.
12.15	Specific Environmental Conditions and Safeguards Which Need to Be Complied With By the Project Proponent During Operation Phase-2,3,4.2,4.3,5,6,7,8,10,11,12.

Proposal in Brief:

1.The highlights of the proposal as ascertained from the application and as revealed from proceedings/discussion held during the meeting of SEAC/SEIAA, are given as under.

- (i) This is a proposal of M/s Calderys India Refractories Ltd. for Environmental Clearance of proposed Construction of “Refractory Manufacturing Plant” Over a Plot area of 1,61,950.46 Sqmt. (over an area 40 acre) with Total Built-up area of 57,826.87 Sqmt. located in Village-Bhuinpur, Tahasil--Begunia, District-Khordha filed by Sri. Satyendra Kumar, Authorized Signatory.
- (ii) The PP has submitted the EC application under item no. 8(a)- ‘Building & Construction Projects’ in the schedule of EIA Notification, 2006 as amended time to time, and the Industrial shed project falls under Category B2 as the built-up area of the Industrial shed is $\geq 20,000$ Sqmt and $< 1,50,000$ Sqmt and it is housing a Refractory Manufacturing Plant.
- (iii) Location and connectivity: The project site is located at plot no. 8, 9, 609, 610, 611 & 614 and Khata No.- 215, Village-Bhuinpur, Tehsil-Begunia, District-Khurda, Odisha. The geographical co-ordinates of centre of project site are Latitude:-20°11'10.41"N and Longitude:-85°27'15.16"E bearing Toposheet no. F45T8. The Nearest Highway is NH-57 which is approx. 1.34 km in North direction from the project site. The nearest Railway Station is Begunia - Train station is about 1.7 km (W) away from the project site. Biju Patnaik International Airport is at 38.7 km (E) from project site. The site is coming under Bhubaneswar Development Authority.
- (iv) Land Details:- The plot area of the project is 1,61,950.46 Sqmt.(40 Acres) with total built-up area of 57,826.87 Sqmt. The land has been given on lease of 90 years by IDCO for development of project. It is proposed to manufacture refractory products with 2,02,800 MTPA production capacity. Products include:
 - Acidic Refractory Bricks 28000 MT,
 - Acidic Monolithics – 62,500 MT,
 - Steel Casting Flux- 31,500 MT,
 - Basic Refractory Bricks- 40,000 MT,
 - Basic Monolithics- 37,500 MT, &
 - Precast Pre-Fired Shaped Refractory- 3,300 MT .
- (v) The Building Area Details of the Project is given below:-

S. No.	Particulars	Total Area (in m ²)
1.	Total Plot Area	1,61,950.46
2.	Permissible Ground Coverage (@40% of the total plot area)	64,780.18
3.	Proposed Ground Coverage (@34.65% of the total plot area)	56,114.55
4.	Permissible FAR (@40% of total plot area)	64780.18
5.	Proposed FAR (@35.7% of the total plot area)	57,826.87
6.	Built Up Area	57,826.87

7.	Landscape Area (@ 33.09% of the total plot area)	53,592.88
8.	Parking Area	14,487.74
9.	Maximum height of the building (m)	28

- (vi) **Water Requirement:** During operation phase, the water requirement will be met from surface water supplied from IDCO. The total water requirement will be approx. 217 KLD out of which domestic water requirement is 45 KLD. The freshwater demand will be approx. 92 KLD. CGWA NOC has been obtained vide no. CGWA/NOC/IND/ ORIG/2024/20122 valid till 07.04.2027.
- (vii) **Waste Water Generation and Management:** It is expected that the project will generate approx. 43 KLD of wastewater. The domestic wastewater will be treated in onsite STP of 50 KLD capacity and industrial wastewater will be treated in an inhouse ETP of 5 KLD capacity. The treated water of 35KLD will be recycled & reused for flushing & horticulture.
- (viii) **Power Requirement:** The power supply will be supplied by State Electricity Distribution Board. The total power demand for Refractory manufacturing plant will be approx. 8000 kVA. The total maximum demand load is estimated as 400 kVA. 5% of the total power demand will be met through solar energy i.e. 400 kVA along with 5% for LED lighting and other conservation measures. Solar energy will be utilized for street lighting, solar blinkers and signage to reduce electricity consumption. There is provision of 2 nos. of DG sets of total 1,500 kVA (1 x 750 kVA + 1 x 750 kVA) capacity for power back up. The DG set will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper dispersion as per CPCB norms.
- (ix) **Rainwater Harvesting:** 95 RWH pits of 78.5 cum capacity each are proposed for artificial ground water recharge.
- (x) **Parking Requirement:** Proposed Parking Area is 14,487.74 Sqmt. for the project. 30% of parking is reserved for EV charging i.e., 4,346.32 m².
- (xi) **Fire Fighting Installation:** Firefighting measures will be adopted as per the guidelines of NBC. External yard hydrants shall be installed around all buildings in the complex in galvanized steel fire house cabinet (weatherproof). All external yard hydrants shall be at one meter height from finished ground level as per NBC at a distance of 60 m along the road. External fire hydrants shall be located such that no portion of any building is more than 45 m from a hydrant and the external hydrants are not vulnerable to mechanical or vehicular damage.
- (xii) **Green Belt Development:** Green Belt will be developed over an area of 53,592.88 Sqmt. i.e. 33.09% of the plot area. Total 2030 Nos. of plants to be planted and 3m spacing between plants and it will be 2 tier plantations.
- (xiii) **Solid Waste Management:** During the operation phase, waste will comprise domestic as well as horticultural waste. The solid waste generated from the project shall be approx. 223 kg per day (@ 0.5 kg per capita per day for residents, @ 0.15 kg per capita per day for the visitor, 0.25 kg per capita per day for the staff members and landscape waste @ 0.2 kg/acre/day. Spent oil from DG sets will be sold to CPCB authorised recyclers. All solid waste disposal in the project will be as per Solid Waste Management Rules, 2016 & amendments thereafter.

- (xiv) Project Cost: Total estimated cost of the proposed project is Rs.723.00 Cr. including land and development cost. The capital cost for environmental management of the proposed project is estimated to be Rs. 189.95lakhs as capital cost and Rs.56.46 lakhs/annum as recurring cost for implementing the measures.
- (xv) The Environment consultant M/s Grass Roots Research & Creation India (P) Ltd., Noida along with the proponent made a presentation on the proposal before the Committee on 04.06.2024.

2. Whether SEAC recommended the proposal: – The proposal was placed in the SEAC meeting held on 04.06.2024 and the SEAC Considering the information furnished and the presentation made by the consultant, M/s Grass Roots Research & Creation India (P) Ltd., Noida along with the project proponent, the SEAC recommended for grant of Environmental Clearance valid for 10 years with stipulated standard conditions in addition to the following specific conditions.

- i) The Proponent before implementation of the project shall convert the land to industrial use and shall take the ownership of the land if not already taken.
- ii) The Proponent shall obtain permission/NOC from Executive Engg. (PHD) and / or from the appropriate authority for disposal of excess ETP/STP treated water to the nearest drain without which the Proponent will not start construction work. Also, in case of the connecting drain passing through others land (Govt. or Private land), the Proponent shall obtain the permission and possession as the case may be.
- iii) The proponent shall use solar energy at least to the tune of 5% of total power requirement as proposed.
- iv) The proponent shall obtain permission from concerned Fire Safety Authority.
- v) The proponent shall obtain permission for water supply.
- vi) The proponent shall abide by Traffic corridors layout as per Traffic Study Report.
- vii) Trees located within the project area shall be transplanted to alongside the boundary green development area.
- viii) The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.
- ix) The project proponent shall maximise utilisation of treated water in flushing, plantations and ground washings etc. as per need to reduce water discharge to drain. This shall be verified in future compliance report.
- x) The project proponent shall adopt adequate pollution control measures to control dust emission as the materials used in whole process is powdered form.
- xi) All compliances submitted/ committed by PP(s) shall be strictly adhered to them in addition to all the conditions/ specific conditions of EC.
- xii) Refractory wastes generated during processing shall be properly utilised or safely disposed.
- xiii) Occupational health monitoring shall be taken up periodically.