



File No: 493408/45-INFRA2/08-2024

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



Dated 03/12/2024



To,

Sri. Sourabh Kumar, Associate VP
M/s AMPIN Solar One Pvt.Ltd.
IDCO Plot No.- S4-EI-01, S4-EI02, S4-EI-03/A(P) & S4-EI-03/B(P), EMC Park, at-Infovalley-II,
Harapur, Tahasil-Bhubaneswar, District-Khordha, Pin-752054
sokumar@ampenergyindia.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 Environment Clearance for Proposed Manufacturing Facility of Solar Cells & Solar Modules by M/s AMPIN Solar One Pvt.Ltd. submitted to SEIAA,Odisha vide proposal number SIA/OR/INFRA2/493408/2024 dated 20/08/2024.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC24C3806OR5526169N
(ii) File No.	493408/45-INFRA2/08-2024
(iii) Clearance Type	EC
(iv) Category	B2
(v) Project/Activity Included Schedule No.	8(a) Building / Construction
(vii) Name of Project	Environment Clearance of Proposed Manufacturing Facility of Solar Cells & Solar Modules by M/s AMPIN Solar One Private Limited
(viii) Name of Company/Organization	M/s AMPIN Solar One Pvt.Ltd.
(ix) Location of Project (District, State)	at-Infovalley-II, Harapur, Tahasil-Bhubaneswar, 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 for EC by SEAC in its meeting held on 05.10.2024. The minutes of the meeting and all the project documents as submitted by project proponent are available in the Parivesh portal which can be accessed from the Parivesh portal by scanning the QR Code above.
5. Details of the project along with 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. This proposal conforms to the 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 project is $\geq 20,000$ Sqmt and $< 1,50,000$ Sqmt.
7. The SEAC, after detailed deliberations made by the Project Proponent and the EIA Consultant, in its meeting held on 05.10.2024 under the provisions of EIA Notification 2006 and its subsequent amendments, recommended the proposal for grant of Environmental Clearance (EC) 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 179th meeting held on 21.11.2024, recommendation of SEAC and in accordance with the EIA Notification, 2006 and further amendments thereto. After detailed deliberation, the Authority approved the grant of EC with standard and specific conditions applicable for this project with additional conditions as recommended by SEAC.
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 setting up of Manufacturing Facility of Solar Cells & Solar Modules having a Plot Area of 60,702.90 Sqmt.(15.00 Acres) With Total Builtup Area of 71,966.82 Sqmt. located at-IDCO plot No. S4-EI-01, S4-EI-02, S4-EI-03 & S4-EI-03/B EMC Park, Infovalley-II, Harapur, Tahasil-Bhubaneswar, District- Khordha by M/s AMPIN Solar One Pvt.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 Environmental Clearance 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 issue with an 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, Regional Office (RO), Ministry of Environment & Forests, GOI, A/3, Chandrasekharpur, Bhubaneswar.
 3. Regional Director, CGWA, South Eastern Region, Bhujal Bhawan, Khandagiri, Bhubaneswar, Pin-751030.
 4. Managing Director, IDCO, Rupali Square, Bhubaneswar-751007

5. Executive Engineer, Bhubaneswar Municipal Corporation, Janpath Road, Unit-9, Bhubaneswar, Pin-751022.This EC may be communicated to the concerned Dept. for compliance of EC.
6. City Planner(I/C),BMC, ICOMC Tower, Janpath Road, Unit-9, Bhubaneswar, Pin-751022.This EC may be communicated to the concerned Dept. for compliance of EC.
7. Member Secretary, OWSSB, Unnati Bhawan,2nd floor, Satya Nagar, Bhubaneswar, Pin-751007.This EC may be communicated to the concerned Dept. for compliance of EC.
8. Engineer-in-Chief, PHD, Unnati Bhawan,1st floor, Satya Nagar, Bhubaneswar, Pin-751007.This EC may be communicated to the concerned Dept. for compliance of EC.
9. Collector, District Magistrate, Khordha, District-Khordha.

Annexure 1

Specific EC Conditions for (Building / Construction)

1. Specific Conditions

S. No	EC Conditions
1.1	<p>i) The Proponent before implementation of the project shall convert the land to Industrial purpose and shall take the ownership of the land if not already taken.</p> <p>ii) The proponent shall obtain BMC/BDA approval of building plan with final layout plan showing the Fire corridor, internal drain, parking etc.</p> <p>iii) The trees which are close to boundary to be retained as a part of green belt. Transplantation of balance trees to be carried out close to the boundary to be a part of green belt. Video/Photo of Transplantation to be recorded for verification during compliances.</p> <p>iv) 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.</p> <p>v) The proponent shall obtain permission from concerned authority for connecting drain to the road side drain with approval of drain layout and discharge of excess treated water.</p> <p>vi) The proponent shall approve drain layout and sewage layout with plan for treatment and disposal of sewage waste.</p> <p>vii) The proponent shall use solar energy at least to the tune of 5%of total power requirement as proposed.</p> <p>viii) The proponent shall obtain permission from concerned Fire Safety Authority and fire protection measures shall be implemented as per recommendation of the Fire Safety Authority.</p> <p>ix) The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.</p> <p>x) 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.</p> <p>xi) 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 should be submitted.</p> <p>xii) The proponent shall handover the hazardous waste generated from the unit to the common TSDF who has proper treatment and disposal facility for such waste and also authorized by the State Pollution Control Board, Odisha.</p> <p>xiii) All compliances submitted/ committed by PP(s) shall be strictly adhered to them in addition to all the conditions/ specific conditions of EC.</p> <p>Xiv) Certificate from CGWA is to be provided before operation.</p>
1.2	The PP shall plant "Ek Ped Maa Ke Naam" and the plantation shall be carried out in the earmarked

S. No	EC Conditions
	22.59% greenbelt area as a part of tree plantation campaign and the details of the same shall be uploaded in the MeriLiFE Portal (https://merilife.nic.in).

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

S. No	EC Conditions
	Environmental Clearance shall be complied with.
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

S. No	EC Conditions
	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) 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.
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. As proposed, 03 nos. of rain water harvesting structures & 25Nos. of RWH pits for artificial ground water recharge shall be installed as per CGWB guidelines.
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 withdrawn without approval from the Competent Authority.

S. No	EC Conditions
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 130 KLD capacity & ETP of 2100KLD shall be installed before start of the operation phase of the project. Treatment of 100% grey water by decentralized treatment should be done. The treated waste water from STP shall be recycled / reused to the maximum extent possible. Process water, Flushing, washing, watering of the lawns and gardening, filter backwash, 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. The sewage treatment plant & ETP shall be made functional before the completion of project. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.
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.

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 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.

S. No	EC Conditions
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.
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

S. No	EC Conditions
	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	Green-belt, lawn area & avenue plantation of trees over the area of 13,715.22Sqmt.(22.59% of plot area) shall be done using native tree species/shrubs improving greenery & keeping in view aesthetics considerations in the whole complex. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Professional landscape architects should be engaged to design the green layout to provide for multi-tier plantation and green fencing all around, mitigating various environmental pollutants like dust, noise, emissions etc. A minimum of 1 tree for every 80 Sqmt of land should be planted and maintained.
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.
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 in terms of ECS & space, both for 4 wheelers / 2 wheelers for the project shall be provided as per the norms considering the population/or visitors in the project.

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.
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.

S. No	EC Conditions
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.

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 Parivesh Portal of Ministry. 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	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
11.4	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 Portal of the Ministry for monitoring of EC Conditions, failing which EC is liable to be revoked.
11.5	The company shall have a well laid down environmental policy duly approved by the Board of 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 Regional Office, MoEF&CC, Govt. of India, Bhubaneswar as well as SEIAA, Odisha as a part of six-monthly report.
11.6	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. The environmental cell shall ensure that the environment infrastructure like sewage treatment plant, landscaping, rain water harvesting, energy efficiency and conservation,

S. No	EC Conditions
	water efficiency and conservation, solid waste management, renewable energy, etc. are kept operational and meet the required standards. The environmental cell shall also keep the record of environment monitoring and those related to the environment infrastructure
11.7	Action plan for implementing EMP 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. 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 Regional Office, MoEF&CC, Govt. of India, Bhubaneswar as well as SEIAA, Odisha along with the Six Monthly Compliance Report.
11.8	The environmental statement for each financial year ending 31 st 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 along with the status of compliance of EC conditions and shall also be sent to the respective Regional Office of MoEF&CC, Govt. of India by E-mail
11.9	The project proponent shall inform the Regional Office as well as the SEIAA,SPCB,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.
11.10	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
11.11	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 Expert Appraisal Committee.
11.12	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
11.13	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.
11.14	The SEIAA may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
11.15	The SEIAA reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
11.16	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
11.17	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

S. No	EC Conditions
	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.
11.18	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
12.1	Recommendations of mitigation measures from possible accident shall be implemented based on Risk Assessment studies conducted for worst case scenarios using latest techniques.

Additional EC Conditions

N/A

Annexure 2

Details of Products & By-products

Name of the product /By-product	Product / By-product	Quantity	Unit	Mode of Transport / Transmission	Remarks (eg. CAS number)
Solar Cell	Solar Cell	1300	Mega Watt (MW)	Road	
Solar Module	Solar Module	1300	Mega Watt (MW)	Road	

Annexure-2

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 AMPIN Solar One Pvt.Ltd. for Environmental Clearance of Proposed Manufacturing Facility of Solar Cells & Solar Modules over a built-up area 71,966.82 Sqmt. at IDCO plot No. S4-EI-01, S4-EI-02, S4-EI-03 & S4-EI-03/B EMC Park, Infovalley-II, Harapur, Tahasil-Bhubaneswar, District- Khordha of Sri Sourabh Kumar, Associate VP.
 - (ii) Category: As per the EIA notification 2006, and its subsequent amendments, proposed project falls in category B under schedule of Item 8(a): Building & Construction Projects.
 - (iii) Location and Connectivity – The proposed site is located at IDCO plot No. S4-EI-01, S4-EI-02, S4-EI-03 & S4-EI-03/B, EMC Park, Infovalley-II, Harapur, Bhubaneswar, Dist.-Khordha Odisha. The Geographical co-ordinates of the project site is Latitude - 20° 14' 23.03" N & Longitude 85° 42' 25.68" E .The project site is well connected with National Highway – 16 at a distance of 2.62 Km in North direction from the project site. The nearest railway station is Bhubaneswar Railway Station at a distance of approx 7 Km in South East direction. The nearest airport is Biju Pattanaik International Airport at a distance of approx. 10.5 Km in East direction from project site.
 - (iv) The site is coming under Bhubaneswar Development Authority
 - (v) The total plot area is 60,702.90 sqm/15 Ac./6.0704 Ha. with total built-up area 71,966.82 sqm.
 - (vi) The Building Area Details of the Project in tabulated form

Particular	Permissible	Proposed
Proposed Project Name	Solar Cells and Modules Manufacturing Facility of M/s AMPIN Solar One Private Limited	
Plot Area	Total Plot Area- 60,702.90 Sqm	
Ground Coverage	30,351.45 Sqm	29,645.47 Sqm (47.84%)
Total Built up Area	--	71,966.82 Sqm
Total FAR Area	--	57,621.40 Sqm
Maximum Height	--	18 m
Road Area	--	8,504.42 Sqm
Parking Area	17,286.42 Sqm	18,399.65 Sqm
Green Belt Area	--	13,715.22 Sqm (22.59 %)
Power/Electricity Requirement & Sources	--	20,000 kVA (33 kV substation – TPCODL/OPTCL)
No. of DG sets	--	8 x 2500 KVA
Solar Energy	--	904.2 KW (5.6%)

Particular	Permissible	Proposed
Water requirement & Sources	--	2790 KLD Source-IDCO Water Supply (Source: Ground Water)
Waste Water Generation	--	2230 KLD
Sewage Treatment & Disposal	--	STP Capacity- 130KLD
Solid Waste Generation	--	125.9 TPM
Estimated Population- Residential, Floating/visitors	--	1153 Nos.

- (vii) Water Requirement: Fresh make up of 790 m³/day will be required for the project which will be sourced from IDCO Water Supply. Total wastewater generated from the industrial shed is 2230 KLD which is treated in STP of Capacity 130 KLD and ETP of capacity 2100 KLD. Rainwater will be harvested through 25 nos. of Rainwater recharging pits and 3 nos. of Rain Water Harvesting reservoir.
- (viii) Power Requirement: Total Power requirement of the proposed industrial shed is 20,000 KW, Source is by 33 kV substations – TPCODL/OPTCL, and 8 x 2500 KVA DG Sets will be provided. Total 904.2 KW Solar Power Generation which is 5.6% of total power required in project.
- (ix) Rainwater Harvesting: Total 2335.2 cum of rainwater will be harvested through 25 nos. of recharge pits and 3 nos. of Rain Water Harvesting reservoir.
- (x) Parking Requirement: Including 30% of parking for EV charging i.e 5,185.92 Sq.mt., the total parking area provided for the proposed project is 18,399.65 Sq.mt.
- (xi) Firefighting Installations: Fire Fighting will be provided as per NBC Norms.
- (xii) Green Belt Development: Greenbelt will be developed over an area of 29,645.47 sqm which is 22.59% of the total plot area. Total 7400 nos. of plants is to be planted with 3 tier plantation.
- (xiii) Solid Waste Management: Solid waste generated and its management.

Solid Waste Generation

Name of Waste	Nature of Waste	Quantity (Tons/Month)	Method of Collection	Disposal Method
ETP Sludge	Industrial	125	Plastic Bag	TSDF
Card Board & Paper	Process	0.41	Plastic Bag	Authorised Recycler
Plastic	Process	0.08	Plastic Bag	Authorised Recycler

Name of Waste	Nature of Waste	Quantity (Tons/Month)	Method of Collection	Disposal Method
Wood	Process	0.25	Plastic Bag	Authorised Recycler
Metal	Process	0.16	Plastic Bag	Authorised Recycler
Glass	Process	0.04	Plastic Bag	Authorised Recycler
Total Solid Waste Generation		125.9 TPM		

(xiv) Project cost: The estimated project cost is 723 Crores and cost for EMP is 80 Crores (as Capital cost) & 11.895 Crores (as Recurring cost).

(xv) Environment Consultant: The Environment consultant M/s Centre for Envotech & Management Consultancy Pvt. Ltd., Bhubaneswar along with the proponent made a presentation on the proposal before the Committee.

(xvi) The SEAC in its meeting on dated 27.08.2024 decided to take decision on the proposal after receipt of the following information / documents from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
i)	A flow diagram depicting the facilities provided in Effluent Treatment Plant (ETP).	The unit will generate wastewater from the industrial use. Hence ETP of 2100.0 KLD capacity has been envisaged to treat the 2100.0 KLD of wastewater and recycle the 1876.5 KLD of treated water back in the process. The flow diagram depicting the facilities provided in Effluent Treatment Plant (ETP) along with STP and ZLD has been attached as Annexure-1 .	Annexure-1 is attached and complied.
ii)	Complete list of Chemicals in a tabulated form indicating its Name, Chemical Abstract Service (CAS) number, Quantity/Volume of generation and consumption in the proposed process and its Disposal/Recycling Facility.	Complete list of Chemicals indicating its Name, Chemical Abstract Service (CAS) number, Quantity/Volume of generation and consumption in the proposed process and its Disposal / Recycling Facility in a tabulated form has been attached as Annexure-2 .	Annexure-2 is attached and complied.
iii)	Inventory of each Chemicals to be used along with its CAS Registry Number.	The inventory of each chemical to be used along with CAS registry number has been furnished in a tabulated form and is attached as Annexure-3 .	Annexure-3 is attached and complied.
iv)	Brief Note on the safety measures proposed for the health hazards of the working personnel/manpower.	As the unit will involve the use of chemicals, the safety measures proposed for the health hazards of the working personnel/manpower in accordance to the use of chemicals along with basic safety	Annexure-4 is attached and complied.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		measures has been summarized and attached as Annexure-4.	
v)	Traffic Study Report vetted by Institute of Repute.	The Traffic Study Report has been vetted by IIT, Bhubaneswar dated 01.10.2024. Same has been attached as Annexure – 5.	Traffic study report is vetted by IIT Bhubaneswar and the same is attached as Annexure 5
vi)	A note on quantity of Solid waste generation and its characteristics.	The proposed industrial shed will produce around 125.94 TPM of solid waste during the operation phase. The details of each waste's quantity, generation and disposal method have been attached as Annexure-6.	Annexure-6 is attached and complied.
vii)	Brief Note on Treatment Plan for storage, handling and disposal of solid, liquid and gaseous process wastes generated during the operation.	The treatment plan for storage, handling and disposal of solid, liquid and gaseous process wastes to be generated during the operation phase have been summarized and attached as Annexure – 7.	Annexure – 7 is attached and complied
viii)	Internal drain layout to be submitted	The internal drain layout is attached as Annexure-8.	Annexure-8 is attached and complied.
ix)	The quantity of ETP sludge is high: 120 ton/month. PP may classify these in to hazardous and non-hazardous and provide possibilities of separate collection and disposal system.	The generation of sludge arises from our Effluent Treatment Plant (ETP) and Sewage Treatment Plant (STP). This sludge undergoes filtration via a filter press and is subsequently stored as a dry solid sludge cake. Additionally, a dry powder in crystalline form will be produced from the evaporation dryer and will be stored in a designated area. Due to the sludge generated from the ETP, STP, and evaporators, we intend to transport this material to an authorized Treatment, Disposal, and Storage Facility (TDSF). This practice is consistent with procedures followed in our two other manufacturing units located in Baddi, Himachal Pradesh. We will ensure compliance with any further recommendations from the Board.	The PP has assured to comply to the given condition.
x)	Can the ETP sludge be useful?	As per the current practice in our Baddi manufacturing plant, this sludge is used in land filling by the Government authorized TSDF agency. Any further guidance and recommendations on this subject shall be complied.	PP has agreed to the condition.
xi)	All solid wastes to be stored with colour code containers under covered area with retaining wall to avoid contamination, till disposed off for further treatment.	Agreed. The undertaking for the same has been attached as Annexure-9.	Project proponent has submitted an undertaking attached as Annexure 9 and complied.

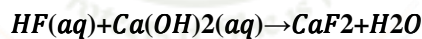
Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
xii)	Tie up with TSDF provider.	AMPIN Solar One Private Limited has initiated the discussion for membership with an authorized TSDF agency and same can be closed after getting the Environmental Clearance and Consent from the board. Details and address of the agency is as mentioned below; M/S: Re Sustainability Limited Formerly M/s Ramky Enviro Engineers Ltd. Odisha Waste Management project, Plot No: 420/648/1, Vill: Kanchichuan, Sukinda, Jajpur, Odisha-755018, India, M:+919853462491, resustainability.com	PP has initiated the discussion for the tie up with TSDF (Re Sustainability Limited, Formerly M/s Ramky Enviro Engineers Ltd. Odisha Waste Management project) and has agreed to the condition.

(xvii) During the process of presentation, the members raised certain queries and the project proponent has replied to the queries as follows:

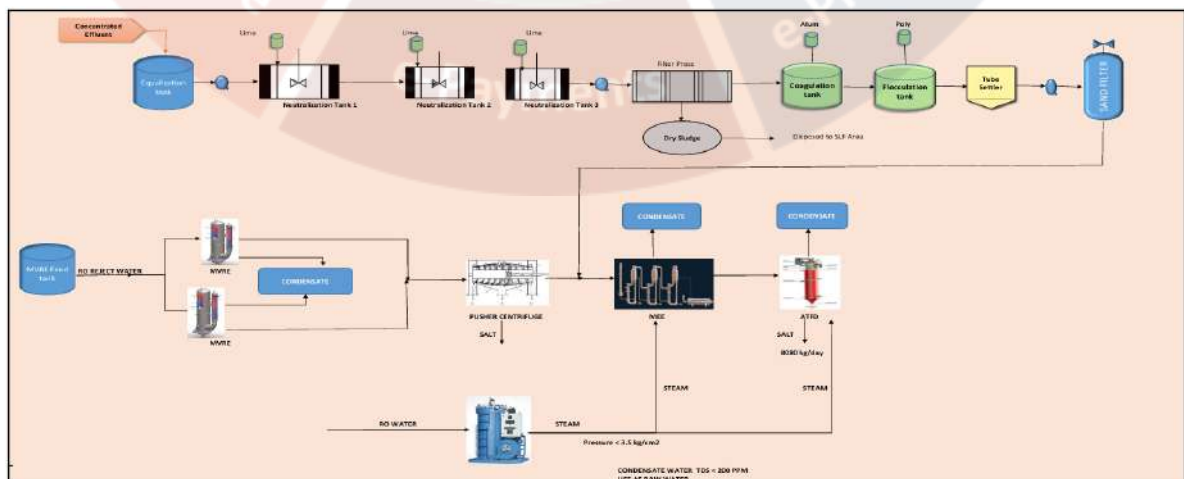
Query 1: As the PP has given document for using/generation of over 3 Kl of HF per day, its treatment and safe disposal is not clear. Fluoride being a hazardous material how the same is removed, needs to be explained.

Response: Hydrofluoric acid (49%) is used in the wafer (an input to cell manufacturing) texturing process, along with ultrapure water and potassium hydroxide (45%) which is alkaline in nature. After the completion of the process cycle and draining phase, the concentration of the chemical decreases due to high water content used for cleaning and rinsing processes, resulting in a very low strength of HF i.e. less than 1%.

This chemical is neutralized in the Effluent Treatment Plant (ETP) using hydrated lime powder. During the reaction, fluoride gets precipitated in the form of calcium fluoride which is separated using the filter press machine.



Generated sludge is sent to the authorised recycler and liquid is treated further in evaporators until it is completely dried. Salt generated from evaporators will also be sent to authorised TSDF ((Transport, Storage & Disposal Facility) agency like Ramky Enviro or as recommended by the State Pollution Control Board, Odisha.



Query 2: The PP in its treatment flow sheet mentioned generation of solid salts. What is the composition and quantity of salt to be generated and what is the safe disposal plan.

Response:

Estimated generation & composition

Estimated total generation of evaporator salt is 25 Tons/Month.

The salt will be generated from drying of the reject water in evaporators like MEE (Multi Effect Evaporator) & MVRE (Mechanical Vapour Recompression Evaporator) systems. Main composition of salts will be - Sodium Chloride (NaCl), Calcium Sulphate (CaSO₄), Fluorides of Calcium & Sodium (CaF, NaF) Magnesium Salts like Magnesium Sulphate (MgSO₄) or Magnesium Chloride (MgCl₂), Sodium Sulphate (Na₂SO₄) etc.

Safe Disposal: Salt disposal will be done by authorised TSDF Agency.

Query 3: The PP has mentioned to tie up with Ramky for hazardous wastes. This needs to be elaborated like - what are the hazardous wastes (composition and quantity) and whether Ramky has capability and permission to treat and dispose such waste? Letter from Ramky to be obtained.

Response: Authorisation Letter issued by State Pollution Control Board, Odisha to Re Sustainability Formerly “Ramky Enviro” is attached as **Annexure-1**.

Details of processes and “Consent to Establish” issued by OSPCB, Odisha has been shared with Ramky Enviro and they have agreed to handle the same. The “Membership Agreement” is also in progress and expected to be completed by the next month.

We have already requested Ramky to submit the letter based on results of actual sample. The actual sample can be provided only after the start of plant operation. Ramky has agreed to it.

On a similar line, TSDF named Shivalik Solid Waste Management Ltd. located in Nalagarh, Dist.-Solan, HP is authorised by the Himachal State Pollution Control Board (HSPCB) for the disposal of such waste for Jupiter International’s solar cell manufacturing facility located in Baddi, HP.

Query 4: The waste management/treatment methods are not clear.

Response: For Liquid waste: There will be Zero Liquid Discharge from the manufacturing facility as we will be deploying advanced treatment technologies used for recycling and evaporation to achieve the zero discharge.

For Other wastes: Based on the type, waste management plan has already been prepared and the same are mentioned below:

- **Solid Waste:** Like cardboards, papers, plastic, woods, metal, glass are valuable scraps, and will be sold for recycling purpose to the competent and authorised vendors
- **Hazardous Waste:** Like ETP Sludge, Evaporator Salts, used/spent Oils, waste containing oils & conterminal chemical drums will be sent to TSDF Agency like Ramky Enviro or other authorized agencies.
- **E-Waste:** Shall be sent to the authorised vendor

Detailed List are as below.

Hazardous Waste Name	Quantity	Stream	Disposal Option (Proposed)	Remarks
Used/ Waste Oil	4000 LPA	Cat - 5.1 From DG, Compressors & Gear boxes	Shall be sent to Authorised Recycler	This waste will be generated during the servicing of DG Sets & compressors and shall be sent to authorised recycler within 90 days
Waste containing oil	50 kg/Annum	Cat - 5.2 From DG, Compressors & Gear Boxes	TSDF (Transportation, Storage & Disposal Facility)	Oil cloths and other items containing oil shall be also sent to authorized TDSF
Contaminated Chemical drums	50 kg/Annum	Cat - 33.1 From - Process	TSDF (Transportation, Storage & Disposal Facility)	Chemical drums which are used in process like HF, KOH, HCl, H ₂ O ₂ etc. shall be send to authorized TSDF

Query 5: Not mentioned in the query list.

Query 6: For the treatment of gases and pollutants, a plasma-based advanced wet scrubbing system is mentioned. However, how it will function is not mentioned. Details to be submitted.

Response: A plasma-based gas scrubber is an advanced and eco-friendly technology used for removing residual pollutants from gas in industry. Here's a brief overview of how it functions:

Item details & their functions:

Plasma Torch- Plasma arc generating unit

Torch Chamber - Gas merge Area

Combustion Chamber: Treat (Breaking & Treatment) waste gases by plasma arc at high temp.

Middle Chamber: Prevent powder accumulation, corrosion.

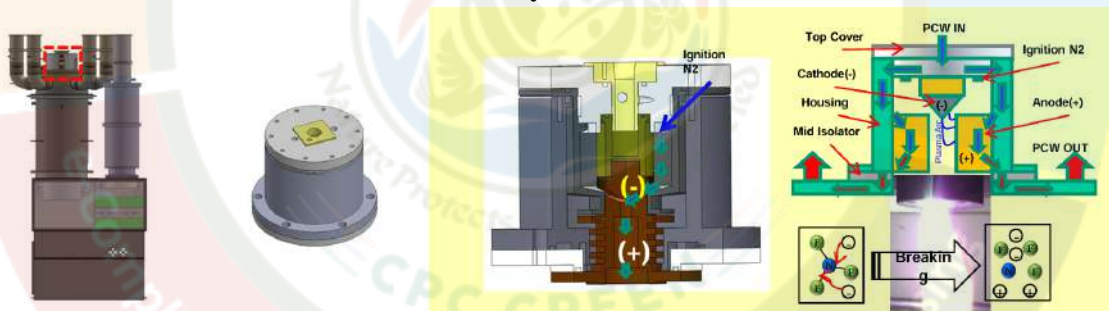
Wet Tank Cooling: Cool down high temperature flow and exhaust to duct

Wet Spray & Packing: Treat the water-soluble gases and powder by water spray

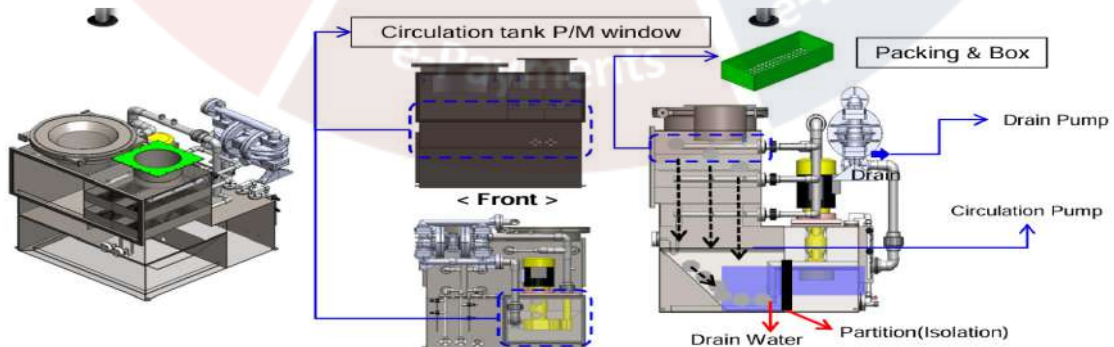
Circulation: Save the water consumption and increase efficiency

Wet Tower: Treat the water-soluble gases and powder with water spray and packing

- **Plasma Torch & Internal Treatment System**



- **Wet Chamber and Recirculation Details**



1. Plasma Generation:

- The system generates plasma by Electric charge using suitable electrodes. This is done using techniques like dielectric barrier discharge.
- The plasma consists of ions, electrons, and neutral particles, which have high energy and temperature which breaks down the residual gases

2. Residual Gas Introduction

- Residual gas is introduced into the scrubber through pipes

3. Ionization and Reactions:

- As the gas passes through the plasma, the energetic species interact with the pollutants. The ionization breaks down complex molecules into simpler ones
- The reactions may include oxidation, reduction, or fragmentation, depending on the types of pollutants and the conditions in the scrubber

Overall, this technology represents a promising approach to managing air quality and reducing environmental impact in industries.

Query -7: Similarly, a detailed list of probable solid wastes to be generated and its handling to be given

Response: Waste generated from the industry will be categorised and handled scientifically as recommended the OSPCB. Details are below:

Name of Waste	Type of Waste	Quantity (Tons/Month)	Disposed	Method of Collection	Disposal Method
ETP Sludge	Industrial	125	125	Plastic Bag	Authorised TSDF
Cardboard & Paper	Process	0.41	0.41	Plastic Bag	Authorised Recycler
Plastic	Process	0.08	0.08	Plastic Bag	Authorised Recycler
Wood	Process	0.25	0.25	Plastic Bag	Authorised Recycler
Metal	Process	0.16	0.16	Plastic Bag	Authorised Recycler
Glass	Process	0.04	0.04	Plastic Bag	Authorised Recycler
E-Waste	Utilities	10Kg		Plastic Bag	Authorised Scraper
Battery Waste	Utilities	50Nos.		Container	Battery Vendor

Query 8: The list of input chemicals used for manufacturing solar panels as submitted by the project proponents in the ADS document are hazardous and corrosive in nature. The daily use quantities of each of these chemicals are also stated to be significant. The project proponent has not mentioned the compositions of the liquid effluents and their quantities before and after processing in the effluent treatment plant. The flow diagrams submitted in ADS are only giving the process flow sequences without any quantitative information on the volume handled and their composition. Such information is essential or effective monitoring of the environment compliance of the project during its operational phase.

- Mass Balance with Stage Wise Treatment details is attached as **Annexure-2**
- Total liquid Waste Generated from the industry shall be of two categories.

1. **Domestic Wastewater:** Will be treated in STP & used for gardening and others as per CTE guidelines. STP is designed with Membrane Bio Reactor to achieve the best possible treatment

Flow per day (Capacity): 130KLD

Design Parameters	Inlet	Treated Outlet
BOD	250-300	<10
COD	400-600	<50
TSS	250-300	<05
T. Nitrogen	<30	<10
pH	6.5-8.5	6.5-8.0
O&G	10 to 15	<1

2. **Industrial Wastewater from Rinsing:**

- A. This wastewater will be generated from the rinsing of wafers during texturing and other wet processes are treated in ETP, UF & 04 Stage Recycling RO System to achieve up to 95% recovery.

Parameters	Inlet Water before ETP	Treated ETP Outlet
pH	6.0-8.0	6.5-7.0
TDS	2000 PPM	0.05 μ S/Cm
TSS	250 PPM	Non-Detectable
COD	500 PPM	Non-Detectable
BOD	200 PPM	Non-Detectable
O&G	05 PPM	Non-Detectable
Reactive Silica	20 PPM	Non-Detectable
Colloidal Silica	05 PPM	Non-Detectable
Hardness	50 PPM	Non-Detectable
Nitrate	30 PPM	Non-Detectable
Fluorides	10 PPM	Non-Detectable
Chlorides	75 PPM	Non-Detectable
Sulphates	50 PPM	Non-Detectable
Sodium	50 PPM	Non-Detectable
Potassium	75 PPM	Non-Detectable
Iron	0.05 PPM	Non-Detectable
Zinc	0.05 PPM	Non-Detectable

Aluminium	02 PPM	Non-Detectable
Ammonium	20 PPM	Non-Detectable

- B. Another type of wastewater will be generated from the Chemical texturing of wafers and other wet processes which will be treated in ETP and Multi Effect Evaporators. After Neutralisation process, this water will be filtered through filter press machine and then will be taken for the physio-chemical treatment. Finally, the liquid water is sent in Multi Effect Evaporator for drying. Final discharge is in form of dry powder salts which will sent to TSDF like Ramky. Sludge generated from filter press will also be sent to Ramky Enviro.

Parameters	Inlet Parameters	Outlet Parameters
pH	2.5-3.5	6.5-8.5
TDS	20000 PPM	250 PPM
TSS	50 PPM	05 PPM
COD	150 PPM	<10 PPM
BOD	50 PPM	<05 PPM
O&G	05 PPM	NIL
Reactive Silica	150 PPM	<0.5 PPM
Colloidal Silica	25 PPM	<0.5PPM
Hardness	50 PPM	<05 PPM
Nitrate	30 PPM	<0.5 PPM
Fluorides	1250 PPM	<01 PPM
Chlorides	950 PPM	<05 PPM
Sulphates	300 PPM	<05 PPM
Sodium	1000 PPM	<10 PPM
Potassium	1850 PPM	<15 PPM
Iron	0.1 PPM	ND
Zinc	0.1 PPM	ND
Aluminium	02 PPM	ND
Ammonium	05 PPM	<01 PPM

(xviii) Any deficiencies/omission have been noticed in the above documents- Nil

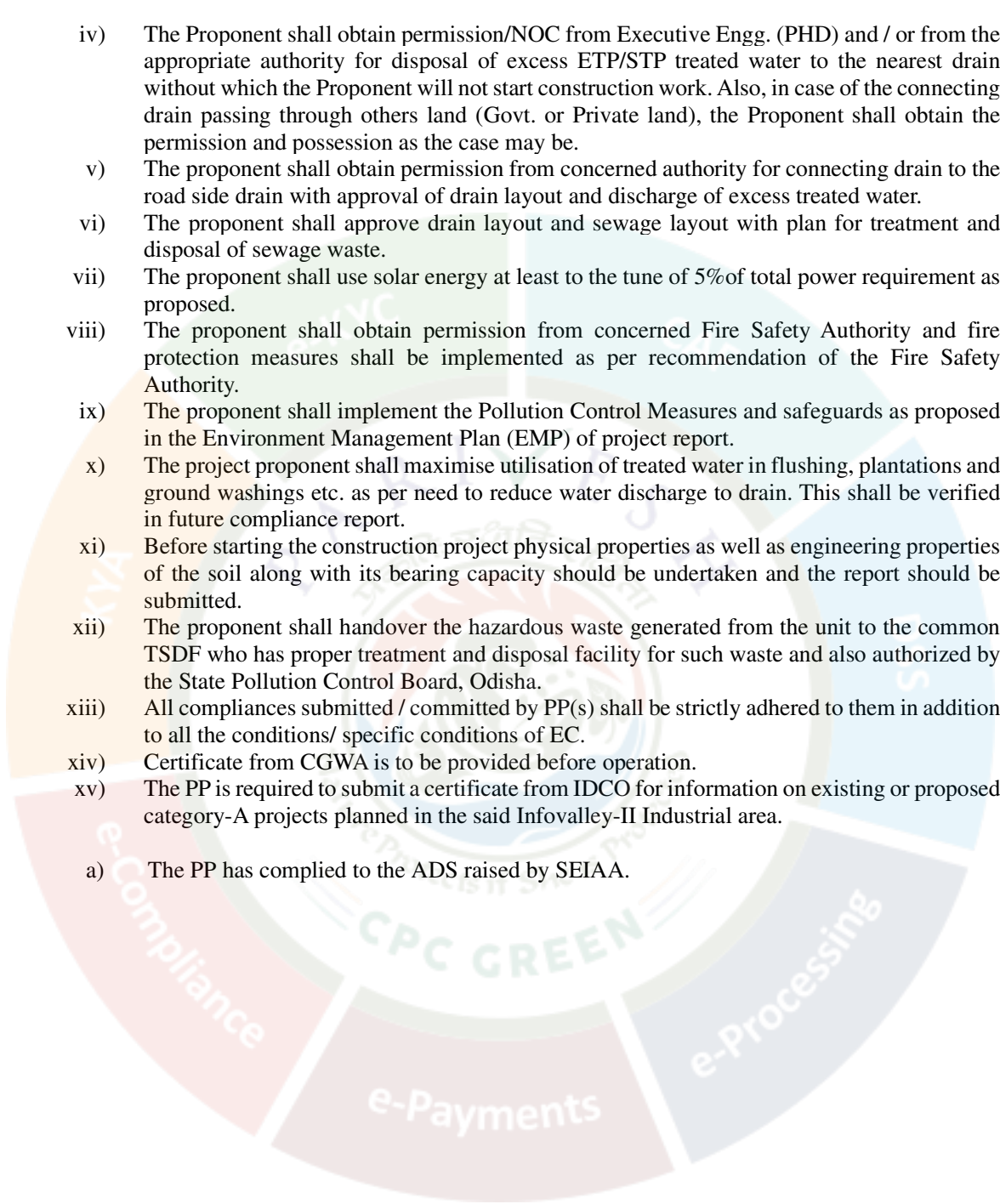
2. **Whether SEAC recommended the proposal** – Yes. The proposal was placed in SEAC meeting held on 05.10.2024 and considering the information furnished and the presentation made by the consultant, M/s Centre for Envotech & Management Consultancy Pvt. Ltd., Bhubaneswar along

with the project proponent, the SEAC recommended for grant of Environmental Clearance valid for 10 years with stipulated conditions in addition to the following specific conditions.

- i) The Proponent before implementation of the project shall convert the land to Industrial purpose and shall take the ownership of the land if not already taken.
- ii) The proponent shall obtain BMC/BDA approval of building plan with final layout plan showing the Fire corridor, internal drain, parking etc.
- iii) The trees which are close to boundary to be retained as a part of green belt. Transplantation of balance trees to be carried out close to the boundary to be a part of green belt. Video/Photo of Transplantation to be recorded for verification during compliances.
- iv) 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.
- v) The proponent shall obtain permission from concerned authority for connecting drain to the road side drain with approval of drain layout and discharge of excess treated water.
- vi) The proponent shall approve drain layout and sewage layout with plan for treatment and disposal of sewage waste.
- vii) The proponent shall use solar energy at least to the tune of 5% of total power requirement as proposed.
- viii) The proponent shall obtain permission from concerned Fire Safety Authority and fire protection measures shall be implemented as per recommendation of the Fire Safety Authority.
- ix) The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.
- x) 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.
- xi) 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 should be submitted.
- xii) The proponent shall handover the hazardous waste generated from the unit to the common TSDF who has proper treatment and disposal facility for such waste and also authorized by the State Pollution Control Board, Odisha.
- xiii) All compliances submitted/ committed by PP(s) shall be strictly adhered to them in addition to all the conditions/ specific conditions of EC.

3. **Decision of Authority:-** The proposal was placed in the 179th meeting of SEIAA held on 21.11.2024 & 22.11.2024 for consideration of EC. After detailed deliberation, the Authority approved the **grant** of **EC** with standard and specific conditions applicable for this project with additional conditions as mentioned below:-

- i) The Proponent before implementation of the project shall convert the land to Industrial purpose and shall take the ownership of the land if not already taken.
- ii) The proponent shall obtain BMC/BDA approval of building plan with final layout plan showing the Fire corridor, internal drain, parking etc.
- iii) The trees which are close to boundary to be retained as a part of green belt. Transplantation of balance trees to be carried out close to the boundary to be a part of green belt. Video/Photo of Transplantation to be recorded for verification during compliances.

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 - v) The proponent shall obtain permission from concerned authority for connecting drain to the road side drain with approval of drain layout and discharge of excess treated water.
 - vi) The proponent shall approve drain layout and sewage layout with plan for treatment and disposal of sewage waste.
 - vii) The proponent shall use solar energy at least to the tune of 5% of total power requirement as proposed.
 - viii) The proponent shall obtain permission from concerned Fire Safety Authority and fire protection measures shall be implemented as per recommendation of the Fire Safety Authority.
 - ix) The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.
 - x) 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.
 - xi) 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 should be submitted.
 - xii) The proponent shall handover the hazardous waste generated from the unit to the common TSDF who has proper treatment and disposal facility for such waste and also authorized by the State Pollution Control Board, Odisha.
 - xiii) All compliances submitted / committed by PP(s) shall be strictly adhered to them in addition to all the conditions/ specific conditions of EC.
 - xiv) Certificate from CGWA is to be provided before operation.
 - xv) The PP is required to submit a certificate from IDCO for information on existing or proposed category-A projects planned in the said Infovalley-II Industrial area.
 - a) The PP has complied to the ADS raised by SEIAA.