STATE EXPERT APPRAISAL COMMITTEE MINUTES OF 450th MEETING **13th August 2020**

The 450th meeting of the State Expert Appraisal Committee (SEAC) was held on 13th August, 2020 under the Chairmanship of Mohd. Kasam Khan for the projects / issues received from SEIAA. The following members attended the meeting in person or through video conferencing -

1. Dr. Mohd. Akram Khan, Member.
2. Dr. A. K. Sharma, Member.
3. Dr. Sonal Mehta, Member.
4. Dr. Jai Prakash Shukla, Member.
5. Dr. R. Maheshwari, Member.
6. Dr. Rubina Chaudhary, Member.
7. Sh. A. A. Mishra, Secretary.

The Chairman welcomed all the members of the Committee and thereafter agenda items were taken up for deliberations.

1. **Case No 6926/2020 M/s Aarti Surfactants Limited, 71, Udyog Kshetra, 2nd Floor, Mulund Goregaon Link Road, Mulund West, Mumbai – 400080 Prior Environment Clearance for Capacity expansion in Sulfonated Products from 36,000 TPA to 1,25,000 TPA, Speclialty Chemical Product – 50,000 TPA and Intermittent Product – 1,900 TPA at Plot No. 57, 58, 60, 61, 62, 62-A, 63, 64, S-3/1, Pithampur Industrial Area, Sector-3, Sagore Village, Pithanpur, Dist. Dhar, (MP).**

   This is case of Prior Environment Clearance for Capacity expansion in Sulfonated Products from 36,000 TPA to 1,25,000 TPA, Speclialty Chemical Product – 50,000 TPA and Intermittent Product – 1,900 TPA at Plot No. 57, 58, 60, 61, 62, 62-A, 63, 64, S-3/1, Pithampur Industrial Area, Sector-3, Sagore Village, Pithanpur, Dist. Dhar, (MP).

   Earlier this case was scheduled for presentation and discussion in 431st SEAC meeting dated 18/03/2020 wherein ToR was recommended.

   PP has submitted the EIA report vide letter dated 09/7/20 which was forwarded through SEIAA vide letter no. 1873 dated 25/07/2020, which was placed before the committee.

   PP and their consultant presented the EIA before the committee during discussion following details of this project was submitted by the PP:

M/s Aarti Surfactants Limited comes under 5 (f) category is proposing capacity expansion in consideration with enhancement in existing product as well as addition of new product given as below :

- Expansion in sulfonated products from 36000 TPA to 125000 TPA (Expansion).
- Specialty Chemical Product: 50000 TPA (Additional).
- Intermittent Product from 300 TPA to 1900 TPA (Expansion).

- M/s ASL is manufacturing sulfonated products like Alfa Olefin Sulfonate (AOS), Sodium Lauryl Sulfate (SLS)/ Sodium Coco Sulfate (SCS), Sodium Lauryl Ether Sulfate (SLES), Linear Alkyl Benzene Sulfonic Acid (LABSA /Acid Slurry), Ammonium Lauryl Sulfate (ALS), Ammonium Lauryl Ether Sulfate (ALES) with production capacity of 36000 TPA and intend to have expansion in production capacity of sulfonated products with the tune of 89000 TPA in above products with intermittent products at the tune of 600 TPA in adjoining plots 62A, 58, S3/1.
- M/s ASL will be manufacturing Speciality Chemical Products (Surfactants) like Coco amido Propyl Betaine (CAPB 30% on Cocoyl), Benzophenon - 3, Benzophenon-4, Ethylene Glycol Mono Stearate, Ethylene Glycol Di- Stearate, DiDecyl Methyl Ammonium Chloride (DDAC), Sodium Lauryl Sarcosinate(30% solution), Sodium Lauryl (or Cocoyl) Glycinate(30% solution), Sodium Cocoyl Isothionate(85%), flakes or needles, Octyl Methoxy Cinnamate, Avobenzone, Octocrylene, Taurate, Glutamate and intend to have set up in production capacity of Speciality Chemical products with the tune of 50000 TPA with by products at the tune of 1300 TPA in adjoining plots 60 & 61.
- ASL intends to utilize the installed plant capacity of 175000 MT/year.
- The project occupies Total Plot Area of 38133.76 sqm and involve in business of manufacturing of sulfonation products. The total fixed cost of the project is INR 45 Crore as per the company gross book value.
- The water requirement for the existing project is 380 KL per day which will be increased to approx. 703 KLD and sourced from AKVN. Total cumulative waste water generation of 71 KLD and will be treated in ETP of 75 KLD, RO of 130 KLD, MEE of 10 KLD, ATFD of 1.5 KLD, STP of 50 KL/day. The treated water will be used for cooling towers, floor washing and gardening/green belt.
- Solid waste generated during the manufacturing process and sludge from waste water treatment process will be disposed at authorized TSDF facility, as per Hazardous and Other Waste (Management & Trans-boundary Movement) Rules, 2008 (Amendment 2016). M/s AIL (SSD) will take expanded authorization Under Hazardous Waste (Management, Handling & Trans-boundary Movement), Rules.
- Power requirement of 5540 KVA will be sourced from existing line of 'Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company'. The company is already authorized to use power

load of 2500KVA. In case of power failure, D.G. set (1500 KVA, 2X1010 KVA, and 2X1010 KVA) will be used as a backup power source.

- The M/s ASL is having existing workers 347 number and will have total manpower of approx. 480 no. after expansion and are/will be from Pithampur and nearby villages/area and therefore no residential planning has been incorporated
- Proposed project shall be carried out in plot no. 58, 62A, S3/1, 60 & 61 (Area 20893.76 sq mt) hence project have adequate land for the proposed activity. The site is located in the Industrial Area
- Major consumers are in the vicinity of the site, viz. Hindustan Unilever, Procter & Gamble, Shivani Detergents, etc

Salient Feature of Project

Particulate	Existing	Proposed	Total Configuration
Product	36000 MTPA of sulfonated products and 300 MTPA of intermittent products.	89000 MTPA of sulfonated products and 50000 MTPA of speciality chemical products and 1600 MTPA of intermittent products	175000 MTPA of sulfonated and speciality chemical products and 1900 MTPA of intermittent products
Estimated Project Cost	5500.00 Lakh.	4500.00 Lakh.	10000.00 Lakh.
Land	17240.00 SqM	20893.76 SqM	38133.76 SqM
Total Water Consumption	380 KLD	323 KLD	703 KLD
Source of Water Supply	Through AKVN Supply		
Waste Water Generation	25.5 KLD	45.5 KLD	71 KLD
Treatment Facility	ETP Capacity- 45 KLD MES Capacity :30 KLD, RO:65KLD, MEE : 10KLD, ATFD : 1.5KLD STP Capacity- 50 KLD ,	ETP Capacity- 30 KLD, RO: 65KLD and ATFD 1.5 KL, products.	ETP Capacity- 75 KLD, RO: 130 KLD, MEE 10 KLD, MES Capacity 30 KLD, ATFD - 3 KLD and STP- 50 KLD Rests the available facilities are adequate for proposed expansion products.
Source of power supply	Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company		
Power Requirement	Existing : 2510 KVA (existing)	Proposed :3030 KVA	Total – 5540 KVA
Fuel Options	Fuel for Boiler is coal and HSD for DG sets, Waste heat Boiler	For Proposed : Waste heat Boiler and HSD for DG sets	In Existing facility : Fuel for Boiler is coal and HSD for DG sets For Proposed : Waste heat Boiler and HSD for DG sets
Major Equipments	Multi Tube Reactor, Annular Falling Film Reactor, Neutralization Skid, Hydrolyzer, Filters, Air Drying	Multi Tube Reactor, Annular Falling Film Reactor, Neutralization Skid, Hydrolyzer, Filters, Air Drying	Multi Tube Reactor, Annular Falling Film Reactor, Neutralization Skid, Hydrolyzer, Filters, Air Drying Plant, Waste

	Plant, Waste Heat Boiler, Cooling Tower, Air Pollution Control Devices, etc.	Plant, Waste Heat Boiler, Cooling Tower, Air Pollution Control Devices, Agitated SS Reactors (5 kl), Agitated SS Reactors (8 kl), Agitated SS Reactors (10 kl), Agitated SS Reactors (30 kl), Agitated HDPE Reactors (10kl), Rising film Heat Exchangers, Stainless steel Condenser -(5 M2), Stainless steel sparkler filter (1000 lt/hr),	Heat Boiler, Cooling Tower, Air Pollution Control Devices, Agitated SS Reactors (5 kl), Agitated SS Reactors (8 kl), Agitated SS Reactors (10 kl), Agitated SS Reactors (30 kl), Agitated HDPE Reactors (10kl), Rising
Major Equipments	Multi Tube Reactor, Annular Falling Film Reactor, Neutralization Skid, Hydrolyzer, Filters, Air Drying Plant, Waste Heat Boiler, Cooling Tower, Air Pollution Control Devices, etc.	Raw material transfer pumps, Product transfer pumps, Distillation System, Centrifuges, Dosing Tanks (1 kl),Receiver tank(1 kl)	Rising film Heat Exchangers, Stainless steel Condenser - (5 M2), Stainless steel sparkler filter (1000 lt/hr), Raw material transfer pumps, Product transfer pumps, Distillation System, Centrifuges, Dosing Tanks (1 kl), Receiver tank (1 kl)
Green Belt	Existing : 5689.20 Sq Mtr	Proposed: 6894.90 Sq Mtr	Total – 12584.14 Sqm and 12786.63 Sqm in AKVN provided land.
Employment generation	347	133	480
Capital cost of environment protection measures	Rs 545 Lacs	Rs 290 + 2.60 Lacs = 292.60 Lacs	Rs 835 + 2.60 Lacs = 837..60 Lacs
Recurring cost of environment protection measures	Rs 33.60 Lacs	Rs 8.92 Lacs + Rs 40 Lacs (towards O&M cost of Air Pollution Control system, ETP, MEE, Incinerator, = Rs 48.92 Lacs	Rs 82.52 Lacs
Fund for CER activities	Existing: 36 Lcas for last three years Proposed: 45 Lcas		

During presentation Pp was asked to provide MoEF&CC compliance report for which PP submitted that they are regularly submitting six monthly compliance report to the competent authorities and also requested MoEF&CC to carryout compliance inspection which was due on 27th July but due to some reason (COVID-19) the visit could not be materialized. PP further requested that their case may be recommended to SEIAA with a condition that PP shall submit MoEF&CC compliance report within 30 days and EC shall be considered only after submission of compliance report. During discussion PP was also asked to provide copy of MoU made with

brick manufacturers for utilization of fly ash. After detail discussion committee has asked the PP to submit the following information:

1. Justification for not furnishing compliance of earlier EC conditions authenticated by competent authority.
2. Undertaking from PP that generated fly ash to be utilized in bricks manufacturing.
3. Land allocated by AKVN for green belt development.
4. Breakup of additional 290 lakhs given in the EMP.
5. End use of exhaust air/gas clearing residue.
6. Justify why clean fuel i.e. CNG as raw material has not used in the boiler.
7. Revised plantation species as suggested by the committee.

PP vide letter dated 13/08/2020 submitted reply of the above query. The query reply was discussed and after deliberations, the submissions and presentation made by the PP were found to be satisfactory and acceptable hence the case was recommended for grant of Prior Environment Clearance for Capacity expansion in Sulfonated Products from 36,000 TPA to 1,25,000 TPA, Speclialty Chemical Product – 50,000 TPA and Intermittent Product 300 MTPA to 1,900 TPA at Plot No. 57, 58, 60, 61, 62, 62-A, 63, 64, S-3/1, Pithampur Industrial Area, Sector-3, Sagore Village, Pithanpur, Dist. Dhar, (MP), subject to the following special conditions and after receipt of satisfactory six monthly compliance report from the competent authority:

(A) Statutory compliance:

1. 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 Madhya Pradesh Pollution Control Board (MPPCB).
2. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.
3. The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.

(B) Air quality monitoring and preservation

1. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in

Environment (Protection) Rules 1986 and connected to MPPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

2. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.
3. To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Sulphur content should not exceed 0.5% in the coal for use in coal fired boilers to control particulate emissions within permissible limits (as applicable). The gaseous emissions from the boiler, DG set and scrubber shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.
4. Storage of raw materials, coal etc shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
5. The DG sets (DG Set* -2X X1010 & 1 X 1500 KVA & 2 x 1010 KVA) shall be equipped with suitable pollution control devices and the adequate stack height so that the emissions are in conformity with the extant regulations and the guidelines in this regard.
6. National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended from time to time shall be followed.
7. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 161h November, 2009 shall be complied with.

(C) Water quality monitoring and preservation

1. The project proponent shall provide online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
2. As already committed by the project proponent Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.
3. The capacity of existing ETP is 45 KLD and blow downs from cooling towers, boiler, Softener regeneration, Vacuum pump form sulphonation plant is approx 27.24 KL is coming to existing ETP of 45 KLD. The treated water from ETP is passed through the RO system and 17.6 KLD of permeate is recycled back in to cooling process whereas

remaining is treated with MEE system. The scrubbed water (5 KLD) and reject from RO water (4.24 KLD) directly goes to MEE (10 KLD) followed by ATFD (1.5 KLD).

4. The capacity of Proposed ETP is 30 KLD and blow downs from cooling towers, boiler, process, Vacuum pump, floor washing form specialty chemical plant is approx 16.12 KL is coming to proposed ETP of 30 KLD. The treated water from ETP (15.122 KLD) is passed through the RO system and 9.6 KLD of permeate is recycled back in to cooling process whereas remaining rejects is treated with MEE system. The scrubbed water (2.5 KLD) and reject from RO water (3.024 KLD) directly goes to MEE (10 KLD) followed by ATFD (1.5KLD).
5. Adhere to 'Zero Liquid Discharge and No industrial effluent from the unit shall be discharged outside the plant premises. PP should also install Internet Protocol PTZ camera with night vision facility along with minimum 05X zoom and data connectivity must be provided to the MPPCB's server for remote operations.
6. The effluent discharge shall conform to the standards prescribed under the Environment (Protection) Rules, 1986, or as specified by the Madhya Pradesh Control Board while granting Consent under the Air/Water Act, whichever is more stringent.
7. The water requirement for the existing project is 380KL per day which will be increased to approx. 703 KLD after expansion and after recycling and reuse, total fresh water requirement for the project after expansion will be approx. 323 KLD, which will be sourced from AKVN.
8. .Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.
9. The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and utilize the same for different industrial operations within the plant.
10. Dedicated power supply shall be ensured for uninterrupted operations of treatment systems.

(D) Noise monitoring and prevention

1. Acoustic enclosure shall be provided to DG ((DG Set* -2X X1010 & 1 X 1500 KVA & 2 x 1010 KVA) set for controlling the noise pollution.

2. The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation.
3. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

(E) Energy Conservation measures

1. The energy sources for lighting purposes shall preferably be LED based.
2. The total power requirements for project will be 5540 KVA. The power will be supplied by Madhya Pradesh Electricity Board. Furnace Oil Consumption 1160 lit/hours, whereas the coal consumption will be 625 kg/hr for both boiler of 3TPH and 2 TPH. (Source Indigeneous) and Natural Gas - 248 SM3/hr for 3.5 TPH

(F) Waste Management

1. Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm and the solvent transfer through pumps.
2. As proposed 95% solvent recovery shall be achieved and recovered solvent shall be reused in the process.
3. Hazardous wastes such as spent solvents, organic incinerable wastes/residues, used filter bags, packaging materials, rejected/expired raw materials and off specification/ rejected finished products from the manufacturing plants shall be directly sent to CTSDF, Dhar.
4. The Fly ash generated from boilers shall be stored in silos and disposed of through cement manufacturers by bulkers / closed containers and should comply with Fly Ash Utilization Notification, 1999 and as amended subsequently.
5. If any Flammable, ignitable, reactive and non-compatible wastes should be stored separately and never should be stored in the same storage shed.
6. Automatic smoke, heat detection system should be provided in the sheds. Adequate fire fighting systems should be provided for the storage area.
7. In order to have appropriate measures to prevent percolation of spills, leaks etc. to the soil and ground water, the storage area should be provided with concrete floor of inert material or steel sheet depending on the characteristics of waste handled and the floor must be structurally sound and chemically compatible with wastes.

8. Measures should be taken to prevent entry of runoff into the storage area. The Storage area shall be designed in such a way that the floor level is at least 150 mm above the maximum flood level.
9. The storage area floor should be provided with secondary containment such as proper slopes as well as collection pit so as to collect wash water and the leakages/spills etc.
10. Storage areas should be provided with adequate number of spill kits at suitable locations. The spill kits should be provided with compatible sorbent material in adequate quantity.
11. Recent MSDS of all the chemicals used in the plant be displayed at appropriate places.
12. Proper fire fighting arrangements in consultation with the fire department should be provided against fire incident.
13. All the storage tanks of raw materials/products shall be fitted with appropriate controls to avoid any spillage / leakage. Bund/dyke walls of suitable height shall be provided to the storage tanks. Closed handling system of chemicals shall be provided.
14. Log-books shall be maintained for disposal of all types hazardous wastes and shall be submitted with the compliance report.
15. Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.
16. The company shall undertake waste minimization measures as below:

    a. Metering and control of quantities of active ingredients to minimize waste.
    b. Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
    c. Use of automated filling to minimize spillage.
    d. Use of Close Feed system into batch reactors.
    e. Venting equipment through vapour recovery system.
    f. Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(G) Green Belt

1. The green belt of 5-10 m width shall be developed 6894.90 sq. meter within plant and 1400 along the road in the project area, mainly along the plant periphery, in downward wind direction and along road sides etc. Selection of plant species shall be as per the CPCB guide lines in consultation with the State Forest Department.
2. Peripheral plantation all around the project boundary shall be carried out using tall saplings of minimum 2 meters height of species which are fast growing with thick canopy

cover preferably of perennial green nature. As proposed 1400 no of plants in one year's shall be planted. PP will also make necessary arrangements for the causality replacement and maintenance of the plants.

(H) Safety, Public hearing and Human health issues

1. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
2. The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.
3. The PP shall provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
4. Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.
5. 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, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
6. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
7. There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places.

(I) Corporate Environment Responsibility

1. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
2. The company shall have a well laid down environmental policy duly approve 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 MoEF&CC as a part of six-monthly report.

3. 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 to the head of the organization.
4. Fund should be exclusively earmarked for the implementation of EMP through a separate bank account.
5. The proposed EMP cost is Rs. 292.60 Lakhs as capital and Rs 8.92 Lacs + Rs 40 Lacs / year as recurring cost.
6. Under CER activity, Rs. 45 Lakhs as capital costs has proposed for different activities. PP shall comply with the commitment of providing infrastructure facility at school.
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. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
8. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

X. Miscellaneous

1. PP shall be responsible for discrepancy (if any) in the submissions made by the PP to SEAC & SEIAA.
2. The project authorities must strictly adhere to the stipulations made by the MP Pollution Control Board and the State Government.
3. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
4. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

5. 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.

2. Case No. – 5682/2018 M/s D.P.Rai Nanhaka, 10 East High Court Road, Ramdeshpeth, Nagpur (Mah) Prior Environment Clearance for Manganese Ore Mine in an area of 4.339 Ha. (120 TPA) (Khasra no. 135/3, 245 (part), 136) at Village- Miragpur, Khairlanji, Tehsil - Lanji, Dist. Balaghat (MP) (Consultant: M/s CES, Bhopal.).

This is case of Manganese Ore Mine. The application was forwarded by SEIAA to SEAC for appraisal. The proposed site is located at (Khasra no. 135/3, 245 (part), 136) at Village- Miragpur, Khairlanji, Tehsil - Lanji, Dist. Balaghat (MP) 4.339 Ha. The project requires prior EC before commencement of any activity at site. PP has submitted ToR application forwarded by the SEIAA vide letter no. 559 dated 16/5/2018. During presentation PP has submitted following information:

Earlier this case was scheduled for presentation and discussion in 316th SEAC meeting dated 19/06/2018 wherein ToR was recommended.

PP has submitted the EIA report vide letter dated NIL which was forwarded through SEIAA vide letter no. 1865 dated 24/07/2020, which was placed before the committee.

The EIA was presented by PP and their consultants presented wherein stated that this mine is proposed for excavation of Manganese ore in 4.339 ha. at village- Miragpur, Tehsil- Khairlanji Dist. Balaghat (MP). The lessee is having adjacent/contiguous mining leases of 24.288 ha. The subject lease is proposed for float ore working and only opencast float ore mining operation shall be carried out using hand tools such as chisel, hammer, crowbar and spades etc.

During presentation it was also observed that the site is in close proximity with the habitations in the north- east corner of the lease for which PP submitted that it's a float ore mining project and mining will be carried out manually. PP further submitted that no drilling and blasting is proposed in this project considering its proximity with the habitations. After presentation and discussion the committee asked to the PP to submit following information:

1. Undertaking that no R&R is pending in the proposed mining project.
2. Protection plan towards village side of the lease.
3. Revised plantation species as instead of Drumstick trees (Munga) add some plants of Kaju plants.
4. Proposal for 1000 nos. of plants are to be proposed on the transportation road, as per issue raised in the public hearing.
5. Justification for several translation mistakes in the Hindi version of the public hearing minutes as pointed out during presentation.

PP vide letter dated 13/08/2020 has submitted the reply of above queries with relevant annexure as follows which was placed before the committee. PP submitted that there is no issue of R&R is pending. The reply submitted by PP was found satisfactory and acceptable and the EIA/EMP and other submissions made by the PP were found to be satisfactory and acceptable, hence committee decided to recommend the case for grant of Prior Environment Clearance for Manganese Ore Mine in an area of 4.339 Ha. (120 TPA) (Khasra no. 135/3, 245 (part), 136) at Village- Miragpur, Khairlanji, Tehsil - Lanji, Dist. Balaghat (MP). subject to the following special conditions:

I. Statutory compliance:

I. This recommendation is subject to orders/judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any Court of Law, Common Cause Conditions as may be applicable.

II. The project proponent complies with all the statutory requirements and Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.

III. The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgments of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.

IV. Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish/Consent to Operate from the concerned State Pollution Control Board/Committee.

V. The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Department & Regulation, Act, 2015 and rules & regulations made there under PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.

VI. The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.

VII. The project proponent shall follow the mitigation measures provided in MoEFCCs Office Memorandum No. Z-11013/57/2014-IA. II (M) dated 29th October 2014, titled "Impact of mining activities on Habitations-issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".

VIII. The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.

IX. The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership of mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provision of the Para-11 of EIA Notification, 2006 as amended from time to time.

II. Air quality monitoring and preservation

I. The Project Proponent shall install a minimum of 3 (three) Ambient Air Quality Monitoring Stations with 1 (One) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120^{O} is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz, PM10, PM2.5, NO2, CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18/11/2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building. Canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in from of the main Gate of the mine sit.

II. Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc) shall be carried out in areas prone to air pollution wherein high levels of pM10 and PM2.5 are evident such as haul road.

Loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/machineries and preventive maintenance. Use of suitable water soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. In shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/Central Pollution Control Board.

III. Water quality monitoring and preservation

I. In case immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEFCC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.

II. Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground Water level and quality shall be submitted on six-monthly basis to the Regional office of the Ministry, CGWA and State Groundwater Department/State Pollution Control Board.

III. Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in an around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operating in consultation with Central Ground Water Authority /State Ground Water Department. The Report on changes in ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department/State Pollution Control Board.

IV. The project Proponent shall undertake regular monitoring of natural water course/water resources/springs and perennial nallahs existing/flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby adjacent to the

mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-à-vis suitability of usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/or alteration be made to water bodies during mining operations without justification and prior approval of MoEFCC. The monitoring of water courses/bodies existing in lease area shall be carried out four times in a year viz. pre-monsoon (April-May), monsoon (August) post monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environmental. Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Ground Water Board. State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six monthly basis.

V. Quality of pollution water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J-20012/1/2006-IA.II(M) dated 27/5/2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard

VI. Project Proponent shall plan develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water/State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional office MoEFCC annually.

VII. Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.

VIII. The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.

IV. Noise and Vibration monitoring and preservation

I. The peak particle velocity at 500 m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.

II. The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operation. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed, by orienting the floodlighs/masks away from the villagers and keeping the noise levels well within the prescribed limits for day/night hours.

III. The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM etc. should be provided with ear plugs/muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case in has been found that workers/personals/laborers are working without personal protective equipment.

V. Mining plan

I. The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc. NO change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz, method of mining, overburden & dump management, O.B. & dump mining, mineral transportation mode, ultimate depth of mining etc) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form to Short Term Permit (STP), Query license or any other name.

II. The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining & Geology as required under the provision of the MMDR Act, 1957 and Rules/Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.

III. The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-à-vis

backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.

VI. Land Reclaimation

I. The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S. w.r.t safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.

II. The reject/waste generated during the mining operations shall be staked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.

III. The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum progressive Mine Closure Plan.

IV. The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface runoff. The selection of local species regulates local climate parameters and help in adaptation of plan species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dump. The dump mass should be consolidated with the help of dozer/compactors thereby ensuring proper filling/leveling of dump mass. In critical areas, use of geo- textiles/ geo-membranes/clay liners/Bentonite etc. shall be undertaken for stabilization of the dump.

V. The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slop stability report shall be submitted to concerned regional office of MoEF&CC

VI. Garland drain , Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/River/Pond etc). The collected water should be utilized for watering the mine area roads, green belt

development, plantation etc. The drain /sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season and maintained properly.

VII. The run-off generated from the temporary dumps of discards and related haulage will be collected through garland drains and further de-siltation will be carried through the run-off management, which comprises of de-silting pits.

Details of Proposed Garland Drains		
Garland drain no.	**Location of Garland drain**	**Size mL X mW X mD**
PGD_1	BP_1 to BP_4	383X 0.5 X 1.0
PGD_2	BP-1 to BP-9	138 X 0.5 X 1.0

VIII. It is proposed to make 4 number of settling pits within the garland drain and proposed to connect drains to large settling tanks through these pits to avoid silt discharge from open ended drain.

IX. All garland drains shall be connected to settling tanks through settling pits and settled water shall be used for dust suppression, green belt development and beneficiation plant. Regular de-silting of drains and pits should be carried out.

X. Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments of sediments/silt material. The sedimentation pits/sumps shall be constructed at the corners of the garland drains.

XI. The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as pre the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.

XII. The existing and proposed land use plan of the mine is as follows:

Items	Existing	Conceptual Period
Total lease area	**4.339ha**	
Ultimate depth of mining	Nil	2mbgl (358m MSL)
Ultimate pit slope	Nil	60 degree
Area under dumps	Nil	Nil
Area under sub grade dump	Nil	Nil
Area under pits	Nil	0.25ha
Area to be reclaimed	Nil	0.25ha
Infrastructure & Road	Nil	0.20ha
Mineral storage	Nil	Nil
Plantation	Nil	1.50ha
Water body	Nil	Nil

VII. Transportation

I. No Transportation of the minerals shall be allowed in case of roads passing through villages/habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling with also be done regularly. Vehicular emission shall be kept under control and regularly monitored. Project should obtain Pollution under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.

II. The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.

VIII. Green Belt

I. Peripheral plantation all around the project boundary shall be carried out using tall saplings of minimum 2 meters height of species which are fast growing with thick canopy cover preferably of perennial green nature. As proposed in the landscape plan & EMP a minimum of 3000 trees shall be planted in barrier zone, backfilled area and along the transportation route.

II. The Project Proponent shall develop greenbelt in 7.5 m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of green belt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

III. The Project Proponent shall carryout plantation/afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc by planting the native species in consultation with the State Forest Department/Agriculture Department/Rural development department/Tribal Welfare Department/Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 samplings per Hectare. Adequate budgetary provision shall be made for protection and care of tree.

IV. The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun should be scrupulously guarded/protected against felling the plantation of such trees should be promoted.

V. The project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation a Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.

VI. And implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.

IX. Public hearing and human health issues

I. The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking etc. The check-ups shall be undertaken once in six months and necessary remedial/preventive measures be taken. A status report on the same may be sent to MoEFCC Regional Office and DGMS on half-yearly basis.

II. The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV. Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking.

III. The proponent shall also create awareness and educate the nearby community and workers for sanitation, Personal Hygiene etc. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.

IV. The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the test and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise investigations relevant to the exposure Blood Lead, For Welders Full Opthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist and Manganese (Mn) Estimation in Blood; For Inorganic Chromium-Fortnightly skin inspection of hands and forearms by a responsible person Except routine tests all test would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos. Hard Rock Mining, Silica, Gold, Kaolin, Aluminum Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines

Departments to make arrangements for the safe and secure storage of the records including X-Ray, Only conventional X-Ray will be accepted for record purpose and not the digital one) X-ray must meet ILO criteria (17 x 14 inches and of good quality) [for Manganese Miners only].

V. The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass index and it should stay between 18.5 – 24.9 (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities (c) At the end of their leaving job there should be no diminution in their Lung Functions Forced Expiratory Volume in one second (FEVI). Forced Vital Capacity (FVC) and the ratio) unless they are smokers which has to be adjusted and the effect of age (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented) (e) they should not have developed any Persistent Back Pain. Neck pain and the movement of their hip Knee and other Joints should have normal range of movement (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEFCC annually along with details of the relief and compensation paid to workers having above indications.

VI. The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

VII. The Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.

VIII. The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.

X. Corporate Environment Responsibility (CER)

I. The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M. No. 22-65/2017-IA.II(M) dated 01/5/2018 or as proposed by SEAC should

be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual and annual report of implementation of the same along with documentary proof viz. photography's. Purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.

II. Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purpose. The Year wise expenditure of such funds should be reported to the MoEFCC and its concerned Regional Office.

III. For Environment Management Plan PP has proposed Rs. 20.37 Lakhs as capital and Rs. 3.37Lakhs as recurring cost for this project.

IV. For this project PP has proposed Rs 2.0 Lakhs as Corporate Environment Responsibility (CER) for remaining project component.

X. Miscellaneous

I. The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEFCC.

II. The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

III. The project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MoEFCC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.

IV. A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive shall directly report to Head of the Organization. Adequate number of qualified persons shall be appointed and submit a report to RO, MoEFCC.

V. The concerned Regional Office of the MoEFCC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEFCC officer(s) by furnishing the requisite data/information/monitoring report.

3. **Case No. – 5681/2018 M/s D.P.Rai Nanhaka, 10 East High Court Road, Ramdeshpeth, Nagpur (Mah) Prior Environment Clearance for Expansion of Opencast and Underground Manganese Ore Mine with physical benefication in an area of 24.288 Ha. (Capacity Expansion from 1300 TPA to 1,05,987 TPA) (Khasra no. 113, 114/1 to 114/5, 115/1 to 115/6, 116, 117/1, 117/2, 118/1, 118/2, 119, 130/1 to 130/3, 131/1, 131/6, 132/1 to 132/5, 133/1 to 133/5, 134/1 to 134/9, 135/1 to 135/3, 247/3) at Village- Miragpur, Khairlanji, Tehsil - Lanji, Dist. Balaghat (MP) (Consultant: M/s CES, Bhopal.).**

This is case of capacity expansion of Manganese Ore Mine with physical benefication. The application was forwarded by SEIAA to SEAC for appraisal. The proposed site is located at (Khasra no. 113, 114/1 to 114/5, 115/1 to 115/6, 116, 117/1, 117/2, 118/1, 118/2, 119, 130/1 to 130/3, 131/1, 131/6, 132/1 to 132/5, 133/1 to 133/5, 134/1 to 134/9, 135/1 to 135/3, 247/3) at Village- Miragpur, Khairlanji, Tehsil - Lanji, Dist. Balaghat (MP) 24.288 Ha. The project requires prior EC before commencement of any activity at site. PP has submitted ToR application forwarded by the SEIAA vide letter no. 557 dated 16/5/2018.During presentation PP has submitted following information:

Earlier this case was scheduled for presentation and discussion in 316th SEAC meeting dated 19/06/2018 wherein ToR was recommended.

PP has submitted the EIA report vide letter dated nil which was forwarded through SEIAA vide letter no. 1867 dated 24/07/2020, which was placed before the committee.

The case was presented by the PP and their consultant wherein PP submitted that it's a proposal for expansion from 1300 TPA to 1,05,987 TPA and modernization with change in technology (from open cast to underground as well as open cast) at village- Miragpur, Tehsil- Khairlanji Dist. Balaghat (MP). Earlier mining operation was carried by opencasts float ore mining method by using hand tools such as chisel, hammer, crowbar and spades etc. but now the seam of manganese is dipping / inclined quite deep hence, opencast mining is not feasible as well as viable hence, proposed mining operation shall be underground.

Underground Mining Method:

In the first year of the proposal period three incline with 15 meters parting between each other from MSL 330m and the "Portal" will be extended up to MSL 360m.

1. **Mode of Entry**

- The Central Incline or the "Production Incline" (PI) will follow a constant gradient of 20 degree
- The other two (One each on East and West side) will follow the actual dip of the ore body
- These incline will be named Manway East and Manyway West as they will be used as Manways till the depth allowed under various rules
- All the three Inclines will be connected with each other at a vertical difference of 15m. This will give second outlet to these working and will assist in maintaining proper ventilation
- The Manway East and Manway West will be further developed by "Ore drives"
- The upper level and lower level of Ore drives from both the Manways, will be connected by Raise/Winze at 25m distance, centre to centre, along the strike
- It is proposed to excavate a cross cut towards south 20degree west from the production Inline to explore the area below MSL by drilling Core bore holes from underground. Similar cross cuts also will be developed at the same horizon to the east and west of the production Inline at 50m interval .

2. **Stoping method (proposed):**

   The Stoping method will be designed after the results of "GEOTECHNICAL INVESTIGATIONS" are to be carried out. However, the present available information indicates possibility of "Two Stoping" methods and they are

- "HORIZONTAL CUT & FILL" for Ore bodies having dip of more than 45°. This is again divided in two types viz. :
- Ore bodies of thickness less than 10 meters. In this case the length of stop will be along the strike.
- Ore bodies of thickness more than 10 meters. In this case the length of stope will be at right angle (90°) to the strike, with barrier pillar of "Ore" in between two stopes

Ventilation Plan

- It is a developing mine and all the faces will be provided with auxiliary ventilation for speedy removal of blasting fumes and circulation of fresh air during other operations.
- It is proposed to provide either electrical or compressed air powered exhaust fans at all the places.

- Further with the advancing faces in all the three Inclines, it is proposed to utilize the Central Main Production Incline as Intake Airway and the East and West side Manway will be used as Return Airway.
- The flow of the air will be guided by installing Air Locks at suitable places after conducting Ventilation survey.

Total man power to be deployed in underground in a shift is not likely to exceed 80 no.

Intake air

1. Vertical Shaft

2. Incline

Return air

Winze

Steps in ventilation planning

Take up the mine plan showing mine layout no. size and position of openings, method of mining and projected working at various stages of mine up to 5 year as given in the ventilation mine plan.

Lay down ventilation standards to be achieved on the basis of Reg. 131 and 144 of MMR 1961. As per above regulation.

CO_2----0.4-0.5% by volume for u/g mine air.

O_2------19-20% by volume of u/g mine air.

N_2------78% by volume of u/g mine air.

Humidity

Wet bulb temperature not exceeding 33.5^{o}C & dry bulb temperature not exceeding 30.5^{o}C. Arrangement are made to ventilate the same with a current of air moving at a speed of not less than 1m/s.

Calculation of Air Quantity

To supply the fresh air in adequate quantity to the working places in order to achieve and keep the standard of ventilation maintained at every time in mine. It is necessary to calculate the quantity of air on the basis of

Breathable air-0.5 m3/min/man when % of carbon dioxides not more than 0.5% in fresh air

O_2%-----19% in fresh air

To get the planned production and development requirement of man power 80 man/shift.

So , Quantity of air required =80x0.5m^3/min =40m^3/min maximum

On the basis of dilution of various gas as produce due to blasting .In solid blasting ,ANFO based explosive produce noxious gas=800-900 litters/kg of explosive

For planned production level maximum of explosive used in u/g mine/shift= 2 (face) x 7Kg/face = 14.00 kg explosive

Total quantity of noxious gas produced in a shift

= 14 x800=11200 litter/1000=11.20m^3

Volume of mixing zone Vm= 2.4x2.0x8=38.4m3

Assuming length of mixing zone=15 m for development needing, and length of mixing zone in stope=10 m

For one face of blast

Q=2.3 Vm/t Log (CO/CP)+(V-Vm/t) m3/min

Where Vm = Volume of mixing zone (m3)

V= Volume of nitrous fume=0.8 to 0.9 m3/kg

CO= initial concentration of nitrous fume =V/VM

(0.8X9.45 (Kg of explosive)/38.4)x100 ==19.69%

At t= 0, V=Vm (Initial condition)

t=30 min (time required to clean the gas)

Q=2.3 Vm/t X log CO/CP + (V-Vm/t) m3/min

=2.3 Vm/t X log CO/CP m3/min

=2.3 x 38.4(m3)/30(m3) x log(19.69/0.005)

=2.3x1.28x3.60=10.60m3/min

For 2 faces of blasting=2 x 10.60 m3/min = 21.20m3/min

(c) Air leakage depends on no. of stopping ,no. of door, air crossing, pit top and pit bottom of every shaft, 2.3 when shaft is used as man winding. On the whole at least 40-50% of air circulated by fan is leaked .So this parameter must be considered during selection of size of fan.

Air quantity requirement =@ 6m3/min/head, total air quantity= 480 M3/min=say, 500M3/min**.**

Including leakages and other losses, Gross total air quantity required may be around 800 M3/Min.

Total Air pressure at fan- drift= 100mm w-g.

It is proposed to use Incline Shaft as INTAKE air way and Vertical shaft no.1 as RETURN air way

Fan Detail:

U/G workings are yet to be commenced. It is essential to estimate the duty required of the fan during its working life before the choice of a particular type can be decided. Values must be allotted to (a) the quantity of air passed by the fan and (b) the maximum water gauge to be developed by the fan. However, where ventilating pressure is expected to be less than 10 inches W-G, the Axial –Flow fan will be preferred

Illumination Details

- Adequate general lighting is provided on the surface at every place like shunting point, loading unloading point, marshaling yard etc. every place where persons have to work.
- During underground mining, adequate lighting will be provided at every landing, pit bottom, travelling road way, pumping stations, first aid room etc.

Roof Support Plan

Rock bolts of 1.5 meter length, 20 mm. dia. are used for roof support on 1 meter grid pattern. Additional support is installed if safety considerations demand. Good quality cement capsules having diameter 20 mm shall be used for grouting the bolts. Each bolt shall take at least 2 tonnes of load in an hour, 4 tones of load in 4 hours and 6 tonnes of load in 8 hours after their installation. The timber used in the construction of chocks/ cogs shall not be less than 1.20 m in length. No timber which is less than 15

cm in diameter shall be used for support. The lids and wedges used with props shall have a width not less than diameter of prop.

Rock bolts/ Roof Bolts:

- 1.5m length, 20/19mm dia and 2.0m length, 20/19mm dia of rock bolt/roof bolt will be used in mine.
- All the rock bolts will be installed, as far as possible at 90 degree to the Dip of the strata in the immediate roof/hangwall
- All the roof bolts in development section will be of resin type.
- The bearing plate/bottom plate shall not be less than 100x100x10mm size with suitable hole in the centre
- The bearing plate will be fixed to the rock bolt with suitable Nut with Washer and tightened full
- The rock bolt/s will follow a grid of 1500mm x 1500mm and one rock bolt will be placed in the centre of the grid.
- Additional rock bolts will be installed depending on the site conditions
- Anchorage test machine with DGMS approval will be kept at suitable place in the mine
- The rock bolts will be checked for anchorage as per the norms set under MMR by DGMS. Records for all such test/s will be maintained in a bound paged book kept for the purpose.
- The rock bolt will be placed/stored in a dry place or will have corrosion proof paint/red oxide etc.
- No oil or grease will be applied to roof bolt either in store or before installation.

Support of the Winze

- Hanging wall/back of winzes/raises/ drives shall be supported by full column grouted rock bolts at least 1.5m length and not less than 20mm dia, set at an interval of 1.0m between the bolts in the same row. A bearing plat not less than 10cm sq and 5mm thick shall be used for tightening the rock bolts. The junctions shall be provided with 10% extra bolts.
- For rock bolts, torque steel rods at least 1.5m in length and not less than 20mm in diameter shall be used. The rock bolts shall be installed in 32mm diameter holes. Good quality cement capsules having diameter 25mm shall be used for grouting the bolts.

Each bolt shall take at least 2 tonnes of load in an hour, 4tonnes of load in 4 hours and 6 tonnes of load in 8 hours after their installation.

- The timber used in the construction of chocks shall not less than 1.2m in length and shall have at least two opposite side joggled flat to provide suitable bearing surface.
- No timber, which is less than 15cm in diameter, shall be used for support.
- The lids and wedges used with the props shall have a width not less than the diameter of the props, thickness not less than 8cm and a length not less than 0.5m.
- After every round of blasting at a face or working places, all supports set/installed in the vicinity of the same and/or danger zone (to be specified by the manager) shall be tightened again and/or re-erected/installed if the same had got dislodged due to any reason whatsoever, before engaging work persons at working face or place as the case may be.
- At least 10% on the cable bolts installed shall be checked for their anchorage by the anchorage-testing machine upto 6tonnes load. A record of the anchorage testing shall be maintained in a bound paged book duly signed by the person in-charge of anchorage test and countersigned by the manager. Each rock bolt shall be capable of withstanding a load 6tonnes within eight hours of its installation.
- Additional supports shall be erected/installed as and when required

During presentation PP informed that they have obtained certified compliance report of earlier EC conditions from MoEF&CC which is issued vide letter dated 09/09/19. PP further submitted that till date the open cast mining was carried out and now considering the seam depth and cost economics underground mining is proposed. PP further informed that necessary provisions are made for ventilation and illumination as per norms and also protection against subsidence along with sand stowing. In case of any emergency rescue plan is also prepared as per the prevailing norms. After presentation and discussion the committee asked to the PP to submit following information:

1. Undertaking that no R&R is pending in the proposed mining project.
2. Revised plantation species as instead of Drumstick add some plants of Kaju plants.
3. Justification for several translation mistakes in the Hindi version of the public hearing minutes as pointed out during presentation.

PP vide letter dated 13/08/2020 has submitted the reply of above queries with relevant annexure as follows which was placed before the committee. The reply submitted by PP was found satisfactory and acceptable and the EIA/EMP and other submissions made by the PP were found to be satisfactory and acceptable, hence committee decided to recommend the case for grant of Prior Environment Clearance for Expansion of Opencast and Underground Manganese Ore Mine with physical benefication in an area of 24.288 Ha. (Capacity Expansion from 1300 TPA to 1,05,987 TPA) (Khasra no. 113, 114/1 to 114/5, 115/1 to 115/6, 116, 117/1, 117/2, 118/1, 118/2, 119, 130/1 to 130/3, 131/1, 131/6, 132/1 to 132/5, 133/1 to 133/5, 134/1 to 134/9, 135/1 to 135/3, 247/3) at Village- Miragpur, Khairlanji, Tehsil - Lanji, Dist. Balaghat (MP) subject to the following special conditions:

I. Statutory compliance:

I. This Environmental Clearance (EC) is subject to orders/judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any Court of Law, Common Cause Conditions as may be applicable.

II. The project proponent complies with all the statutory requirements and Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.

III. The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgments of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.

IV. Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish/Consent to Operate from the concerned State Pollution Control Board/Committee.

V. The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Department & Regulation, Act, 2015 and rules & regulations made there under PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.

VI. The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.

VII. The project proponent shall follow the mitigation measures provided in MoEFCCs Office Memorandum No. Z-11013/57/2014-IA.II(M) dated 29th October 2014, titled "Impact of mining activities on Habitations-issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area" .

VIII. The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water/ if GW intersection is proposed for the project.

IX. State Pollution Control Board/Committee shall be responsible for display of the EC letter at its Regional Office, District Industries Centre and Collector's office/Tehsildar's Office for 30 days.

X. The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership of mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provision of the Para-11 of EIA Notification, 2006 as amended from time to time.

XI. In case of sand stowing with tailings, lechate study shall be carried out and same shall be executed only after approval from the MP Pollution Control Board. PP shall also explore the possibility of using inert materials such as fly ash/ceramic waste after proper scientific study.

II. Air quality monitoring and preservation

I. The Project Proponent shall install a minimum of 3 (three) Ambient Air Quality Monitoring Stations with 1 (One) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120^{O} is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz, PM10, PM2.5, NO2, CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18/11/2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building. Canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in from of the main Gate of the mine sit.

II. Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc) shall be carried out in areas prone to air pollution wherein high levels of pM10 and PM2.5 are evident such as haul road. Loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/machineries and preventive maintenance. Use of suitable water soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. In shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/Central Pollution Control Board.

III. Water quality monitoring and preservation

I. In case immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEFCC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.

II. Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground Water level and quality shall be submitted on six-monthly basis to the Regional office of the Ministry, CGWA and State Groundwater Department/State Pollution Control Board.

III. Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in an around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operating in consultation with Central Ground Water Authority /State Ground Water Department. The Report on changes in ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department/State Pollution Control Board.

IV. The project Proponent shall undertake regular monitoring of natural water course/water resources/springs and perennial nallahs existing/flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-à-vis suitability of usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/or alteration be made to water bodies during mining operations without justification and prior approval of MoEFCC. The monitoring of water courses/bodies existing in lease area shall be carried out four times in a year viz. pre-monsoon (April-May), monsoon (August) post monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environmental. Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Ground Water Board. State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six monthly bases.

V. Quality of pollution water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J-20012/1/2006-IA.II(M) dated 27/5/2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard

VI. Project Proponent shall plan develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water/State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional office MoEFCC annually.

VII. Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.

VIII. The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.

IV. Noise and Vibration monitoring and preservation

I. The peak particle velocity at 500 m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.

II. The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operation. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed, by orienting the floodlighs/masks away from the villagers and keeping the noise levels well within the prescribed limits for day/night hours.

III. The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM etc. should be provided with ear plugs/muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case in has been found that workers/personals/laborers are working without personal protective equipment.

V. Mining plan

I. The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc. NO change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz, method of mining, overburden & dump management, O.B. & dump mining, mineral transportation mode, ultimate depth of mining etc) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form to Short Term Permit (STP), Query license or any other name.

II. The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining & Geology as required under the provision of the MMDR Act, 1957 and Rules/Guidelines made there under. A copy of

approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.

III. The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-à-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.

VI. Land Reclaimation

I. The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S. w.r.t safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.

II. The reject/waste generated during the mining operations shall be staked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.

III. The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum progressive Mine Closure Plan.

IV. The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface runoff. The selection of local species regulates local climate parameters and help in adaptation of plan species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dump. The dump mass should be consolidated with the help of dozer/compactors thereby ensuring proper filling/leveling of dump mass. In critical areas, use of geo- textiles/ geo-membranes/clay liners/Bentonite etc. shall be undertaken for stabilization of the dump.

V. The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slop stability report shall be submitted to concerned regional office of MoEF&CC

VI. Garland drain , Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/River/Pond etc). The collected water should be utilized for watering the mine area roads, green belt development, plantation etc. The drain /sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season and maintained properly.

VII. Garland drain and bund along with settling tank will be maintained in the boundary side and around dump to prevent siltation of low lying areas and in rush of water into the mine. The size of the drain will be as-

Details of Proposed Garland Drains		
Garland drain no.	**Location of Garland drain**	**Size mL X mW X mD**
PGD_1	BP_14 to BP_23	729X 0.5 X 1.0
PGD_2	BP-23 to BP-30	508 X 0.5 X 1.0
PGD_3	BP-30 to BP-1	508 X 0.5 X 1.0

VIII. All garland drains shall be connected to settling tanks through settling pits and settled water shall be used for dust suppression, green belt development and beneficiation plant. Regular de-silting of drains and pits should be carried out.

IX. It is proposed to make 11 number of settling pits within the garland drain and proposed to connect drains to large settling tanks through these pits to avoid silt discharge from open ended drain. The size of the drain will be as-

Details of proposed settling pits		
Indentified Drain With No.	No. of Settling Pit	Size of Settling Pit (M) W X L X D
PGD_1	PSP_1 to PSP_4	0.75x0.5x1.5
PGD_2	PSP_5 to PSP_7	0.75x0.5x1.5
PGD_2 & PGD_3	PSP_8	0.75x0.5x1.5
PGD_3	PSP_9 to PSP_11	0.75x0.5x1.5

03 numbers of settling tanks will be proposed in lease area. Details has been given in below :

Detail of proposed settling Tanks		
Settling tank no.	Location	Size
Settling tank no. 1	BP_22A	0.14haX 5.0mD
Settling tank no. 2	BP_31	0.41haX 5.0mD
Settling tank no. 3	BP_26	0.10haX 5.0mD

X. Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments of sediments/silt material. The sedimentation pits/sumps shall be constructed at the corners of the garland drains.

XI. The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as pre the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.

XII. The existing and proposed land use plan of the mine is as follows:

Items	**Existing**	**SOM period (5 year)**	**Conceptual Period**
Total lease area	24.288 ha		
Ultimate depth of mining	9m bgl	330m AMSL (30m bgl-opencast)	330m AMSL (30m bgl-opencast) 281m AMSL (79m bgl-underground)
Area under dumps	Nil	10.1429ha	Nil

Area under pits	0.4180ha	2.6792 ha (Opencast)	2.6792 ha (Opencast)
Infrastructure & Road	0.20ha	0.35ha	Nil
Mineral storage	Nil	Nil	Nil
Plantation	0.10ha	4.10ha	7.60ha
Un-worked area	23.57ha	6.7459ha	14.0088 ha
Total	24.288 ha	24.288 ha	24.288 ha
Water body	0.25ha	0.75ha	2.00 ha
Area to be reclaimed	Nil	Nil	0.50ha
Plantation			
Un-worked area plantation	0.10 (150 No.)	4.00ha (8000No)	7.60 ha (15150No.)
Backfilling area plantation	Nil	Nil	0.50ha (1000No.)
Bench slope plantation	Nil	Nil	Nil
Total area for plantation	0.10 (150 No.)	4.00ha (8000No)	8.10 ha (16150No.)

VII. Transportation

I. No Transportation of the minerals is allowed from the road passing through villages/habitations. PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling with also be done regularly. Vehicular emission shall be kept under control and regularly monitored. Project should obtain Pollution under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.

II. The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.

VIII. Green Belt

I. Peripheral plantation all around the project boundary shall be carried out using tall saplings of minimum 2 meters height of species which are fast growing with thick canopy cover preferably of perennial green nature. As proposed in the landscape plan & EMP a minimum of 16,150 (8.10 ha.) trees shall be planted in barrier zone, backfilled area and along the transportation route.

II. The Project Proponent shall develop greenbelt in 7.5 m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of green belt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

III. The Project Proponent shall carryout plantation/afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc by planting the native species in consultation with the State Forest Department/Agriculture Department/Rural development department/Tribal Welfare Department/Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 samplings per Hectare. Adequate budgetary provision shall be made for protection and care of tree.

IV. The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on

such grazing ground, which provide mid-day shelter from the scorching sun should be scrupulously guarded/protected against felling the plantation of such trees should be promoted.

V. The project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation a Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.

VI. And implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.

IX. Public hearing and human health issues

I. The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking etc. The check-ups shall be undertaken once in six months and necessary remedial/preventive measures be taken. A status report on the same may be sent to MoEFCC Regional Office and DGMS on half-yearly basis.

II. The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV. Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking.

III. The proponent shall also create awareness and educate the nearby community and workers for sanitation, Personal Hygiene. Hand washing, not to defecate in open. Women Health and Hygiene. Hand washing, not to defecate in open. Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.

IV. The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the test and investigations

relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise investigations relevant to the exposure Blood Lead, For Welders Full Opthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist and Manganese (Mn) Estimation in Blood; For Inorganic Chromium-Fortnightly skin inspection of hands and forearms by a responsible person Except routine tests all test would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos. Hard Rock Mining, Silica, Gold, Kaolin, Aluminum Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray, Only conventional X-Ray will be accepted for record purpose and not the digital one) X-ray must meet ILO criteria (17 x 14 inches and of good quality) [for Manganese Miners only]

V. The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass index and it should stay between 18.5 – 24.9 (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities (c) At the end of their leaving job there should be no diminution in their Lung Functions Forced Expiratory Volume in one second (FEVI). Forced Vital Capacity (FVC) and the ratio) unless they are smokers which has to be adjusted and the effect of age (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented) (e) they should not have developed any Persistent Back Pain. Neck pain and the movement of their hip Knee and other Joints should have normal range of movement (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEFCC annually along with details of the relief and compensation paid to workers having above indications.

VI. The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

VII. The Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related

infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.

VIII. The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.

X. Corporate Environment Responsibility (CER)

V. The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M. No. 22-65/2017-IA.II(M) dated 01/5/2018 or as proposed by SEAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual and annual report of implementation of the same along with documentary proof viz. photography's. Purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.

VI. Project Proponent shall keep the funds earmarked for environmental protection measures in a separate count and refrain from diverting the same for other purpose. The Year wise expenditure of such funds should be reported to the MoEFCC and its concerned Regional Office.

VII. For Environment Management Plan PP has proposed Rs. 62.06 Lakhs as capital and Rs. 18.64 Lakhs as recurring cost for this project.

VIII. For this project PP has proposed Rs 6.0 Lakhs as Corporate Environment Responsibility (CER) for remaining project component.

XI. Miscellaneous

VI. The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEFCC.

VII. The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

VIII. The project Proponent shall submit six monthly compliance report on the status of the implementation of the stipulated environmental safeguards to the MoEFCC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.

IX. A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientist and Minig Engineers shall be appointed and submit a report to RO, MoEFCC.

X. The concerned Regional Office of the MoEFCC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEFCC officer(s) by furnishing the requisite data/information/monitoring report.

4. Case No. – 6218/2019 M/s D.P.Rai, Shri D.P.Rai, Nanhaka, 10, East High Court Road, Ramdeshpeth, Dist. Nahpur, Mah. Prior Environment Clearance for Expansion of Manganese Ore Mine in an area of 14.90 ha. (10,000 tonne per annum to 60,000 tonne per annum) (Khasra No. 1, 2, 3, 4, 9, 10, 11), W.O. 136, 137, 138 Village - Pandharwani, Tehsil - Khairlanji, Dist. Balaghat (MP).

This is case of Capacity Expansion of Manganese Ore Mine with physical beneficiation through crusher. The application was forwarded by SEIAA to SEAC for appraisal. The proposed site at (Khasra No. 1, 2, 3, 4, 9, 10, 11), W.O. 136, 137, 138), Village - Pandharwani, Tehsil - Khairlanji, Dist. Balaghat (MP) 14.90 Ha. The project requires prior EC before commencement of any activity at site.

Earlier this case was scheduled for presentation and discussion in 374th SEAC meeting dated 25/05/2019 wherein ToR was recommended.

PP has submitted the EIA report vide letter dated NIL which was forwarded through SEIAA vide letter no. 2023 dated 07/08/2020, which was placed before the committee.

The case was presented by the PP and their consultant wherein PP submitted that it's a proposal for capacity expansion is proposed in Manganese ore mining from 10,000 TPA to 60,000 TPA along with crusher in the ML of 14.90 ha at village- Pandarwani, Tehsil- Khairlanji Dist. Balaghat (MP) through opencast and underground method. It was observed that the EC compliance report submitted in the EIA which was issued by MoEF&CC was satisfactory.

The salient features of the project:

Summarised of geological reserves and mineable reserves	
Particulate	Details
Geological reserves as per pervious mining scheme	
Measured mineral resources (area x incline length) 4200m2 (350m L x 12m Width) x 45m ((35+35+65)/3) (331)	661500.00 T
Infrared mineral resources (333) (area x incline length) 900m2 (75m L x 12m Width) x 35m	110250.00 T
Feasibility mineral resources (221)	
Ore blocked in barrier zone T 7.5m x 12m x 100m x 3.5 BD	31500.00 T
Ore blocked in underground safety About 30% ore will be blocked = 661500 x 0.30	198450.00 T
Total minerals blocked 31500 + 198450	229950.00 T
Total geological reserves = 661500 – 229950	431550.00 T
Total recoverable reserves as on date 01.04.2018	413264.00 T
Production in next five year period	110500.00 T
Balance reserves 413264-110500	302764.00 T
Proposed capacity	60000.00 T
Hence mine life = 5 + 302764/60000.00 = 5.05+5	10.06 says 10years

Mining Method and Production Details

- Opencast as well as underground other than fully mechanical mining method will be adopted.
- Opencast mining : Considering the open cast reserves the proposals are given to float ore working in the south and North West part of lease area
- Loading and unloading on trucks has been done by excavator cum loader.
- Presently 4.97ha area has been excavated during past mining activity upto 3-46m and during conceptual period working will be carried out in same pit in depth wise. No further excavation will be carried out.

- During the first year working main incline and vertical winze/shaft in the ore zone will be developed for underground working. The main incline is proposed upto excavated till mRL 240 and vertical winze/shaft upto mRL 250.
- During the conceptual period dump ore working will also be done.
- During the conceptual period about 2.2252ha will be backfilled using mine waste and rest of area will be backfilled using water.
- After manual screening of low grade manganese from sub-grade dump and mine waste dump, crushing will be done in lease area by crusher.

Underground Mining Method

In the first year of the proposal period Main Incline and Vertical Winze/Shaft in the ore zone will be developed. It is proposed to commence Cross Cuts / Ore Drives as follows:

1. Main Incline from MRL 285, 270, 255 i.e. at 15 meter vertical interval
2. Vertical Shaft/ Winze: MRL 300 only in the North direction i.e. away from the pit MRL 285, 270, 255 at 15 meter vertical interval
3. The main incline is proposed up to be excavated till MRL 240 and Vertical Shaft up to MRL 250.
4. The thickness of the ore body varies from 10m to 19m. The strike direction is NE to SW. Dip is towards North and at an average angle of +70 degree to almost vertical.

Mode of entry

- Main Incline is proposed in the central part with angle of 20degree of the lease area and the advance will be in south west direction. Excavated size is 3.6 x 2.5m and finished size is 2 x 2.3m.
- Vertical Shaft/ Winze from the northern portion of the lease area. This will provide second out let to the working from the main incline with excavated size of 6.0m x 4.0m and finished size is 5.0m x 4.0m
- Cross cuts, ore derives, raises and winzes from both the sides i.e. from main incline as well as from vertical shaft.

Stoping method (proposed):

- "HORIZONTAL CUT & FILL" for Ore bodies having dip of more than 45°. This is again divided in two types viz**. :**
- Ore bodies of thickness less than 10 meters. In this case the length of stop will be along the strike.

- Ore bodies of thickness more than 10 meters. In this case the length of stope will be at right angle (90°) to the strike, with barrier pillar of "Ore" in between two stopes .
- Stoping of ore bodies dipping at less than 450 angle"
- Breast Stoping (Modified)" with "Dry Filling" or "Sand Stowing" for Ore bodies of thickness up to maximum of 2.5 meters.
- "Room & Pillar" or "Post Pillar" for Ore bodies of thickness more than 2.5 meters.

Method selected for stoping

With the various structural findings in the exploration the most probable method of stopping appears to be "Horizontal Cut and fill with post filling by hydraulic and filling/backfilling with waste/OB etc.

The stoping proceeds from bottom level towards upper level starting from the Winze/Raise interconnection between levels.

- Method and sequence of stoping
- Winzes/Raises of 2.4 x 2.4m will be developed from one level to the another at 30m strike intervals.
- The level interval scheduled at 15m from one level to another
- Ore drive of 3x2.4m size driven following the FW will be connected to the shaft inset/incline bottom for drawing of ROM
- The above development forms a Stope block size of 30mx15m which are numbered serially in the order of priority of stoping
- Room height between the stope back and the back-fill/sand fill will be maintained at 2.4m while the width of stope will be equal to the width of the ore body
- Before any slice of stope back is taken rock bolting at a grid pattern of 2mx2m and a bolt in the center-5no. rock bolts of 2m length made of 20mm Tor steels will be grouted in the roof of the stope. Rock bolts will be fixed at right angle to the dip of the HW with a base plate tightened against the roof which will be tested for anchorage (for a minimum of 6Tons load-10% rock bolts will be tested).
- The ROM from the stope will be transported to Vertical shaft or Incline shaft bottom from where is hoisted to the surface.

- When stoping over fill width of ore body along strike for a length equal to a stope panel, maximum stress will be generated at the HW and FW contacts. Therefore cable bolts and rock bolts are placed in the back at a grid interval of 2m
- In this case entire length of strike at the bottom most level (250mRL) will be stoped out simultaneously starting from NE boundary and SW boundary of the lease area keeping the VS-1 and Incline shaft hoisting system intact.
- Shaft pillar around the Incline shaft or Vertical shaft in ore if any will be also mined out with backfilling.

Drilling In Stopes: for a slice/advance of 1.5m in the back of the stope, 1600mmx32mm drill steel rods are used for drilling. Drilling parameters are given below

- Spacing – 0.8m to 12.0m depending on the fragmentation required
- Burden – 0.8m
- Length of holes – 1.5m
- Volume broken/hole = 1.5x1x0.8 = 1.2cum= 4.2T of ore

Blasting in Stopes:

- Charge/hole – 2 cartridges = 250gms
- Stoping material – wet clay mixed with sand or drill cutting
- Explosive used – Slurry explosive – in Cartridges from of 20cmx25mm dia – 125gms each
- Strength of explosive – 80%
- Length of each stope block – 30m (center to center)
- Effective length of stope block – 17m
- One round, it is proposed to have one slice of 1.5m over full stope back of 27m
- No. of holes in a row over 10m width of stope – 9 holes
- Total no. of holes in one stope block/slice = 27 x 9 = 243 holes
- Total charges required – 243 x 250gms = 60.75kg
- No of holes/blast = 30holes = 30x 4.2 = 126T
- Powder factor – 4.2 t from 250gms of explosive =16.8T/kg

Vertical Winze/Shaft Pillar:

Considerable quantity of ore will be blocked in these safety/protective pillars. All the pillars will be extracted just before closure of the mine and the technique of extraction will depend upon the geotechnical data and the equipment available at the point of time. It can be assumed that at least 70 to 75% of the ore blocked in the "Shaft Pillars" will be extracted safely other than blocked in the "barrier pillar" left between the opencast working and underground working.

Hoisting

Main Incline will be furnished with 40 lbs rails. Haulage will be installed at the surface (20HP). A one ton capacity tub will on the track line. Excavated materials from the Incline will be loaded into tub manually and the haulage will pull it up to the surface. As proposed, Excavations including drives/x-cuts and winzes etc. will be carried out through Main Incline and Vertical Shaft No.1 both. Track lines will be laid in the Level drive and a set of 3-4 tubs will be provided. Excavated materials will be hoisted to the surface through the Main Incline and Vertical shaft no.1 both. The two Main entries will be protected and maintained till the life of the mine and same arrangement as above will continue for transportation of minerals from u/g workings. Main Incline will also serve as Man way.

Sand stowing

- Sand stowing operation for the proposed block will be carried out by sand stowing plant situated at surface. The bunker capacity of the plant is 15cum and the mixing chamber capacity is 4 cum., through which sand and water mixture in the ratio 1:9 flows. Sand stowing capacity of the plant is 5 cum / hr.
- In each stope the ore body at MRL 250 shall be stripped from hanging wall to footwall up to a maximum height of 3 m. and stoping shall then be proceeded from MRL 286 to MRL 305 in conjunction with hydraulic sand stowing / waste rock filing.
- Sand stowing / waste rock filling shall be done up to a height of 2 m. from floor leaving 1 m. gap along roof within 15 m. distance of the moving face.
- Before mining next upper lift, the lower lift will be filled from wall to wall leaving a travelling way of 1.5 m. wide in footwall contact keeping unfilled for maintaining interconnection between two adjacent stopes.

- Sand shall be feed from surface bunker to the working faces through HDPE pipe 4" diameter laid in winze. Bamboo mats and hassion cloth shall be used for barricading purpose.
- 2" weep holes shall be left in crosscut concrete lining to drain out the water of sand stowing and to release the hydro static pressure.
- Sand, Tailing waste, fly ash and/or Slag will be used for stowing purpose.

VENTILATION PLAN

Natural ventilation will be established in all the workings from Vertical Shaft and Incline. During Conceptual period when stoping operation is undertaken, the maximum depth of working may be around 100m (Surface-350MRL, Deepest level of workings-250MRL) & extent of workings is also within 300m range from NE to SW ML boundary. Man and Machineries requirement is expected to be moderate in view of the moderate level of production. Total man power to be deployed in underground in a shift is not likely to exceed 80 no.

Intake air

1. Vertical Shaft

2. Incline

Return air

Winze

Ventilation planning

Steps in ventilation planning

CO_2----0.4-0.5% by volume for u/g mine air.

O_2------19-20% by volume of u/g mine air.

N_2------78% by volume of u/g mine air.

Humidity

Wet bulb temperature not exceeding 33.5^{o}C & dry bulb temperature not exceeding 30.5^{o}C. Arrangement are made to ventilate the same with a current of air moving at a speed of not less than 1m/s.

Calculation of Air Quantity

To supply the fresh air in adequate quantity to the working places in order to achieve and keep the standard of ventilation maintained at every time in mine. It is necessary to calculate the quantity of air on the basis of Breathable air-0.5 m3/min/man when % of carbon dioxides not more than 0.5% in fresh air

O_2%-----19% in fresh air

To get the planned production and development requirement of man power 80 man/shift.

So

Quantity of air required =80x0.5m^3/min =40m^3/min maximum

On the basis of dilution of various gas as produce due to blasting .In solid blasting ,ANFO based explosive produce noxious gas=800-900 litters/kg of explosive.

For planned production level maximum of explosive used in u/g mine/shift= 2 (face) x 7Kg/face = 14.00 kg explosive

Total quantity of noxious gas produced in a shift

= 14 x800=11200 litter/1000=11.20m^3

Volume of mixing zone Vm= 2.4x2.0x8=38.4m3

Assuming length of mixing zone=15 m for development needing, and length of mixing zone in stope=10 m

For one face of blast

Q=2.3 Vm/t Log (CO/CP)+(V-Vm/t) m3/min

Where Vm = Volume of mixing zone (m3)

V= Volume of nitrous fume=0.8 to 0.9 m3/kg

CO= initial concentration of nitrous fume

=V/VM = (0.8X9.45 (Kg of explosive)/38.4)x100 =19.69%

At t= 0, V=Vm (Initial condition)

t=30 min (time required to clean the gas)

Q=2.3 Vm/t X log CO/CP + (V-Vm/t) m3/min

=2.3 Vm/t X log CO/CP m3/min =2.3 x 38.4(m3)/30(m3) x log(19.69/0.005)

=2.3x1.28x3.60=10.60m3/min For 2 faces of blasting=2 x 10.60 m3/min = 21.20m3/min

Air leakage depends on no. of stopping, no. of door, air crossing, pit top and pit bottom of every shaft, 2.3 when shaft is used as man winding. On the whole at least 40-50% of air circulated by fan is leaked. So this parameter must be considered during selection of size of fan.

Air quantity requirement =@ 6m3/min/head, total air quantity= 480 M3/min=say, 500M3/min.

Including leakages and other losses, Gross total air quantity required may be around 800 M3/Min.

Total Air pressure at fan- drift= 100mm w-g.

It is proposed to use Incline Shaft as INTAKE air way and Vertical shaft no.1 as RETURN air way

Fan Detail: U/G workings are yet to be commenced. It is essential to estimate the duty required of the fan during its working life before the choice of a particular type can be decided. Values must be allotted to (a) the quantity of air passed by the fan and (b) the maximum water gauge to be developed by the fan. However, where ventilating pressure is expected to be less than 10 inches W-G, the Axial –Flow fan will be preferred.

During presentation, PP submitted that necessary provisions are made for ventilation and illumination as per norms and also protection against subsidence along with sand stowing. In case of any emergency rescue plan is also prepared as per the prevailing norms. During presentation PP informed that they have obtained certified compliance report of earlier EC conditions from MoEF&CC which is issued vide letter dated 18/07/19. After presentation and discussion the committee asked to the PP to submit following information:

1. Undertaking that no R&R is pending in the proposed mining project.
2. Necessary correction in the Hindi version of the public hearing minutes as pointed out during presentation.
3. Commitment for no transportation during school time.

PP vide letter dated 13/08/2020 has submitted the reply of above queries with relevant annexure as follows which was placed before the committee:

The reply submitted by PP was found satisfactory and acceptable and the EIA/EMP and other submissions made by the PP were found to be satisfactory and acceptable, hence committee

decided to recommend the case for grant of Prior Environment Clearance for Expansion of Manganese Ore Mine in an area of 14.90 ha. (10,000 tonne per annum to 60,000 tonne per annum) (Khasra No. 1, 2, 3, 4, 9, 10, 11), W.O. 136, 137, 138 Village - Pandharwani, Tehsil - Khairlanji, Dist. Balaghat (MP).subject to the following special conditions:

I. Statutory compliance:

I. This Environmental Clearance (EC) is subject to orders/judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any Court of Law, Common Cause Conditions as may be applicable.

II. The project proponent complies with all the statutory requirements and Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.

III. The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgments of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.

IV. Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish/Consent to Operate from the concerned State Pollution Control Board/Committee.

V. The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Department & Regulation, Act, 2015 and rules & regulations made there under PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.

VI. The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.

VII. The project proponent shall follow the mitigation measures provided in MoEFCCs Office Memorandum No. Z-11013/57/2014-IA.II(M) dated 29th October 2014, titled "Impact of mining activities on Habitations-issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area" .

VIII. The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water/ if GW intersection is proposed for the project.

IX. State Pollution Control Board/Committee shall be responsible for display of the EC letter at its Regional Office, District Industries Centre and Collector's office/Tehsildar's Office for 30 days.

X. The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership of mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provision of the Para-11 of EIA Notification, 2006 as amended from time to time.

XI. In case of sand stowing with tailings, lechate study shall be carried out and same shall be executed only after approval from the MP Pollution Control Board. PP shall also explore the possibility of using inert materials such as fly ash/ceramic waste after proper scientific study.

II. Air quality monitoring and preservation

I. The Project Proponent shall install a minimum of 3 (three) Ambient Air Quality Monitoring Stations with 1 (One) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120^{O} is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz, PM10, PM2.5, NO2, CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18/11/2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building. Canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in from of the main Gate of the mine sit.

II. Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc) shall be carried out in areas prone to air pollution wherein high levels of pM10 and PM2.5 are evident such as haul road. Loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/machineries and preventive maintenance. Use of suitable water soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. In shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/Central Pollution Control Board.

III. Water quality monitoring and preservation

I. In case immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEFCC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.

II. Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground Water level and quality shall be submitted on six-monthly basis to the Regional office of the Ministry, CGWA and State Groundwater Department/State Pollution Control Board.

III. Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in an around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operating in consultation with Central Ground Water Authority /State Ground Water Department. The Report on changes in ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department/State Pollution Control Board.

IV. The project Proponent shall undertake regular monitoring of natural water course/water resources/springs and perennial nallahs existing/flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-à-vis suitability of usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/or alteration be made to water bodies during mining operations without justification and prior approval of MoEFCC. The

monitoring of water courses/bodies existing in lease area shall be carried out four times in a year viz. pre-monsoon (April-May), monsoon (August) post monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environmental. Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Ground Water Board. State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six monthly basis.

V. Quality of pollution water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J-20012/1/2006-IA.II(M) dated 27/5/2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard

VI. Project Proponent shall plan develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water/State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional office MoEFCC annually.

VII. Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.

VIII. The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.

IV. Noise and Vibration monitoring and preservation

I. The peak particle velocity at 500 m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.

II. The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operation. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not

disturbed, by orienting the floodlighs/masks away from the villagers and keeping the noise levels well within the prescribed limits for day/night hours.

III. The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM etc. should be provided with ear plugs/muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case in has been found that workers/personals/laborers are working without personal protective equipment.

V. Mining plan

I. The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc. NO change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz, method of mining, overburden & dump management, O.B. & dump mining, mineral transportation mode, ultimate depth of mining etc) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form to Short Term Permit (STP), Query license or any other name.

II. The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining & Geology as required under the provision of the MMDR Act, 1957 and Rules/Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.

III. The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-à-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.

VI. Land Reclaimation

I. The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S. w.r.t safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.

II. The reject/waste generated during the mining operations shall be staked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.

III. The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum progressive Mine Closure Plan.

IV. The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface runoff. The selection of local species regulates local climate parameters and help in adaptation of plan species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dump. The dump mass should be consolidated with the help of dozer/compactors thereby ensuring proper filling/leveling of dump mass. In critical areas, use of geo- textiles/ geo-membranes/clay liners/Bentonite etc. shall be undertaken for stabilization of the dump.

V. The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slop stability report shall be submitted to concerned regional office of MoEF&CC

VI. Garland drain , Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/River/Pond etc). The collected water should be utilized for watering the mine area roads, green belt development, plantation etc. The drain /sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season and maintained properly.

VII. The run-off generated from the temporary dumps of discards and related haulage will be collected through garland drains and further de-siltation will be carried through the run-off management, which comprises of de-silting pits. The size of the drain will be as-

Details of existing and proposed garland drain		
Garland drain no.	**Location of Garland drain**	**Size mL X mW X mD**
Existing garland drain		
EGD_1	Along the pit (North direction)	235.0 X 0.25X 0.50
EGD_2	OB Dump	800.0 X 0.25X 0.50
EGD_3	Along the haul road	437.0 X 0.10X 0.25
EGD_4	Along the pit (eastern direction)	348.0 X 0.25X 0.50
EGD_5	Along the Haul road	200.0 X 0.10X 0.25
EGD_6	Along the Magazine	200.0 X 0.25X 0.50
Proposed garland drain		
PGD-1	OB dump-1	1000x 0.25 x 0.50
PGD_2	Along the pit (southern direction)	500.0 X 0.25X 0.50
PGD_3	Along the pit (east direction)	275.0 X 0.25X 0.50

VIII. All garland drains shall be connected to settling tanks through settling pits and settled water shall be used for dust suppression, green belt development and beneficiation plant. Regular de-silting of drains and pits should be carried out.

IX. It is proposed to make 8 number of settling pits within the garland drain and proposed to connect drains to large settling tanks through these pits to avoid silt discharge from open ended drain. The size of the drain will be as-

Details of proposed settling pit		
Indentified Drain with No.	**No. of Settling Pit**	**Size of Settling Pit (M) L X W X D**
Existing settling pit		
EGD_2	ESP_1	0.5 x 0.35 x 0.5
Proposed settling pits		

EGD_2	PSP_1	0.5x0.35x0.5
EGD_2	PSP_2	0.5x0.35x0.5
EGD_2 & PGD_1	PSP_3	0.5x0.35x0.5
PGD_1	PSP_4	0.5x0.35x0.5
PGD_1	PSP_5	0.5x0.35x0.5
PGD_2	PSP_6	0.5x0.35x0.5
EGD_4	PSP_7	0.5x0.35x0.5
EGD_4	PSP_8	0.5x0.35x0.5

X. There is 01 water body cum settling tank and two other settling tanks have been reported in lease area. The de-silted water will be drained to nalla or may be provided for agricultural purposes after ensuring it's quality. 02 number of settling tanks will be proposed in western part of lease area. Details has been given in below –

Details of existing and proposed settling Tank		
Settling tank no.	**Location**	**Size**
Existing settling tank		
EST_1	Exiting pit	1.50ha x 10m
EST_2	South part of lease area	0.50ha x 5m
EST_3	Near mine office	10mL x 10mW x 2m D
Proposed settling tank		
PST_1	EGD_2_along the dump	10.0L x 5.0W x 5.0D
PST_2	EGD_2_along the dump	10.0L x 5.0W x 5.0D

XI. Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall

(based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments of sediments/silt material. The sedimentation pits/sumps shall be constructed at the corners of the garland drains.

XII. The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as pre the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.

XIII. The existing and proposed land use plan of the mine is as follows:

Items	**Existing**	**SOM period (5years)**	**Conceptual Period**
Total lease area	**14.90 ha**		
Ultimate depth of mining	50m bgl	Upto 265mRL	Up to 240mRL (Underground)
Ultimate pit slope	60 degree	60 degree	60 degree
Area under dumps	0.2850 ha	0.40ha	Nil
Area under sub grade dump	0.1792ha	0.1792ha	Nil
Area under pits	4.97ha	4.97ha	4.97 ha
Area to be reclaimed	Nil	1.00ha	2.2252 ha
Infrastructure & Road	1.50ha	1.50ha	1.50ha
Mineral storage	0.2950 ha	0.328ha	Nil
Plantation	0.27 ha	2.00ha	7.2252 ha
Water body	1.2 ha	1.20ha	2.0 ha

VII. Transportation

I. No Transportation of the minerals is allowed from the road passing through villages/habitations. PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling with also be done regularly. Vehicular emission shall be kept under control and regularly monitored. Project should obtain Pollution under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.

II. The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.

VIII. Green Belt

I. Peripheral plantation all around the project boundary shall be carried out using tall saplings of minimum 2 meters height of species which are fast growing with thick canopy cover preferably of perennial green nature. As proposed in the landscape plan & EMP a minimum of 11,380 (5.98ha +350m (road side) trees shall be planted in barrier zone, backfilled area and along the transportation route.

II. The Project Proponent shall develop greenbelt in 7.5 m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of green belt

shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

III. The Project Proponent shall carryout plantation/afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc by planting the native species in consultation with the State Forest Department/Agriculture Department/Rural development department/Tribal Welfare Department/Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 samplings per Hectare. Adequate budgetary provision shall be made for protection and care of tree.

IV. The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun should be scrupulously guarded/protected against felling the plantation of such trees should be promoted.

V. The project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation a Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.

VI. And implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.

IX. Public hearing and human health issues

I. The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking etc. The check-ups shall be undertaken once in six months and necessary remedial/preventive measures be taken. A status report on the same may be sent to MoEFCC Regional Office and DGMS on half-yearly basis.

II. The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV. Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking.

III. The proponent shall also create awareness and educate the nearby community and workers for sanitation, Personal Hygiene etc. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.

IV. The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the test and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise investigations relevant to the exposure Blood Lead, For Welders Full Opthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist and Manganese (Mn) Estimation in Blood; For Inorganic Chromium-Fortnightly skin inspection of hands and forearms by a responsible person Except routine tests all test would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos. Hard Rock Mining, Silica, Gold, Kaolin, Aluminum Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray, Only conventional X-Ray will be accepted for record purpose and not the digital one) X-ray must meet ILO criteria (17 x 14 inches and of good quality) [for Manganese Miners only]

V. The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass index and it should stay between 18.5 – 24.9 (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities (c) At the end of their leaving job there should be no diminution in their Lung Functions Forced Expiratory Volume in one second (FEVI). Forced Vital Capacity (FVC) and the ratio) unless they are smokers which has to be adjusted and the effect of age (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented) (e) they should not have developed any Persistent Back Pain. Neck pain and the movement of their hip Knee and other Joints should have normal range of movement (f) they

should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEFCC annually along with details of the relief and compensation paid to workers having above indications.

VI. The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

VII. The Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.

VIII. The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.

X. Corporate Environment Responsibility (CER)

I. The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M. No. 22-65/2017-IA.II(M) dated 01/5/2018 or as proposed by SEAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual and annual report of implementation of the same along with documentary proof viz. photography's. Purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.

II. Project Proponent shall keep the funds earmarked for environmental protection measures in a separate count and refrain from diverting the same for other purpose. The Year wise expenditure of such funds should be reported to the MoEFCC and its concerned Regional Office.

III. For Environment Management Plan PP has proposed Rs. 54.60Lakhs as capital and Rs. 19.14Lakhs as recurring cost for this project.

IV. For this project PP has proposed Rs 14.00 Lakhs as Corporate Environment Responsibility (CER) for remaining project component.

XI. Miscellaneous

I. The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEFCC.

II. The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

III. The project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MoEFCC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.

IV. A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientist and Minig Engineers shall be appointed and submit a report to RO, MoEFCC.

V. The concerned Regional Office of the MoEFCC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEFCC officer(s) by furnishing the requisite data/information/monitoring report.

5. <u>Case No. - 5640/2017 Shri Pawan Pandey, 10, Singhai Colony, Dist. Katni, MP Prior Environment Clearance for Limestone and Dolomite Mine in an area of 2.10 Ha. (Limestone - 10,080 Ton per Annum, Dolomite - 24,848 Ton per Annum) (Khasra no. 475) at Village- Nanhwara, Tehsil - Badwara, Dist. Katni (MP).</u>

This is case of Limestone and Dolomite Mine. The proposed site is located at (Khasra no. 475) at Village- Nanhwara, Tehsil - Badwara, Dist. Katni (MP) 2.10 Ha. The project requires prior EC before commencement of any activity at site. PP has submitted ToR application forwarded by the SEIAA vide letter no. 1592 dated 24/1/2018.

Earlier this case was scheduled for presentation and discussion in 307th SEAC meeting dated 23/02/2018 wherein ToR was recommended.

PP has submitted the EIA report dated 16/06/2020 which was forwarded through SEIAA vide letter no. 1190 dated 19/06/2020, which was placed before the committee.

The case was scheduled for presentation but neither the Project Proponent (PP) nor his representative was present to explain the query which might be raised or to make any commitment which may be desired by the committee during the deliberation. PP was also absent in 443th meeting dated 02/07/2020 & 449th SEAC meeting dated 24/07/2020. Committee decided to call the PP in subsequent meetings giving last chance to present their case and even if PP remains absent the case shall be returned to SEIAA assuming that PP is not interested to continue with the project.

The case was presented by the PP and their consultant wherein it was observed by the committee through Google image that it's an existing mine and the lease area is mined out which is filled with water. It was also observed that some tress are in existence in the lease area for which PP submitted that mainly shrubs have grown in the lease area however, the trees in the 7.5 meter barrier zone will not be uprooted and the trees in the minable area will be uprooted only after the approval of the competent authority.

After presentation, PP was asked to provide response on following:

- Justification of pit which is existed in the lease area

PP vide their letter dated 16/03/2019 submitted that the mining was sanctioned in year 2002 and was in operation under consent of air and water act till 2014 afterwards the working was stopped for wants of EC in line with decision given by the H'ble NGT. During operative period only 1.0979 ha., was mined out with 1.0 meter depth. The EIA/EMP and other submissions made by the PP were found to be satisfactory and acceptable, hence committee decided to recommend the case for grant of prior EC Limestone and Dolomite Mine in an area of 2.10 Ha. (Limestone - 10,080 Ton per Annum, Dolomite - 24,848 Ton per Annum) (Khasra no. 475) at Village- Nanhwara, Tehsil - Badwara, Dist. Katni (MP)., subject to the following special conditions:

(A) PRE-MINING PHASE

1. The lease boundary should be clearly demarcated at site with the given co-ordinates by pillars.
2. Necessary consents for proposed activity shall be obtained from MPPCB and the air / water pollution control measures have to be installed as per the recommendation of MPPCB.
3. Authorization (if required) under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 should be obtained by the PP if required.

4. PP will also carry out fencing all around the lease area.
5. If any tree uprooting is proposed necessary permission from the competent authority should be obtained for the same.
6. For dust suppression, regular sprinkling of water should be undertaken.
7. Haul road and shall be compacted on regular interval and transport road will be made pucca (tar road) and shall be constructed prior to operation of mine.
8. PP will obtain other necessary clearances/NOC from respective authorities.
9. Slope stability study shall be carriedout before commencing the mining activities.
10. Reject stone shall be sold only after approval of the State Government as per the prevailing rules & regulations.

(B) MINING OPERATIONAL PHASE

11. No overcharging during blasting to avoid vibration.
12. Controlled and muffle blasting shall be carried out considering habitation northern side of the lease.
13. Working height of the loading machines shall be compatible with bench configuration.
14. Slurry Mixed Explosive (SME) shall be used instead of solid cartridge.
15. No explosive will be stored at the mine site.
16. No intermediate stacking is permitted at the mine site.
17. No dump shall be stacked outside the lease area.
18. Overhead sprinklers shall be provided in mine.
19. Curtaining of site shall be done through thick plantation all around the boundaries of all part of lease. The proposed plantation scheme should be carried out along with the mining and PP would maintain the plants for five years including casualty replacement. Initially, dense plantation shall be developed along the site boundary (in three rows) to provide additional protection in one year only.
20. Peripheral plantation all around the project boundary shall be carried out using tall saplings of minimum 2 meters height of species which are fast growing with thick canopy cover preferably of perennial green nature. As proposed in the landscape plan & EMP a minimum of 1700 trees (0.8525ha.) shall be planted on barrier zone, backfilled area and along the transportation route.
21. Transportation of material shall be done in covered vehicles.
22. Transportation of minerals shall not be carried out through forest area.
23. The OB shall be reutilized for maintenance of road. PP shall bound to compliance the final closure plan as approved by the IBM.
24. Garland drain and bund along with settling tank will be maintained in the boundary side and around dump to prevent siltation of low lying areas and in rush of water into the mine.

25. The size of the Garland drain will be as given below:

Details of proposed garland drain		
Garland drain no.	**Location of Garland drain**	**Size mL X mW X mD**
PGD_1	BP-12 to BP-17	240.0 X 0.5 X 1.0
PGD_2	BP-3 to BP-11	262.0 X 0.5 X 1.0

26. The settling tank will be 08 in number of size will be as given below:

Indentified Drain With No.	**No. of Settling Pit**	**Size of Settling Pit (M) W X L X D**
PGD_1	PSP_1 to PSP_3	0.5x0.35x1.5
PGD_2	PSP_4 to PSP_8	0.5x0.35x1.5

27. One settling tank is suggested to control sedimentation problem. The size will be as given below:

Details of proposed settling Tank		
Settling tank no.	**Location**	**Size**
Settling tank no. 1	BP_1	0.25ha x 5mD

28. All garland drains shall be connected to settling tanks through settling pits and settled water shall be used for dust suppression, green belt development and beneficiation plant. Regular de-silting of drains and pits should be carried out.
29. For dust suppression over head sprinkler shall be provided while on transport road for dust suppression tankers shall be provided.
30. The existing and proposed land use plan of the mine is as follows:

Items	**Existing**	**Conceptual Period**
Total lease area	**2.10 ha**	
Ultimate depth of	1m bgl (434m MSL)	1m bgl (434m MSL)

mining		
Area under dumps	0.093 ha	0.2491 ha
Area under pits	1.0979 ha	1.3401 ha
Infrastructure & Road	0.0664 ha	0.009
Mineral storage	Nil	Nil
Plantation	Nil	0.5018 ha
Un-worked area	0.8427ha	Nil
Total	**2.10ha**	**2.10 ha**
Water body	0.25 ha	1.1894 ha
Area to be reclaimed	Nil	0.1507 ha
Plantation		
Un-worked area	Nil	0.5018ha
Backfilled area	Nil	0.1507ha
Dump area	Nil	0.20 ha
Total area for plantation	Nil	0.8525 ha

31. Appropriate and submitted activities shall be taken up for social up-liftment of the Region. Funds reserved towards the same shall be utilized through Gram Panchayat. Further any need base and appropriate activity may be taken up in coordination with local panchayat.
32. PP will take adequate precautions so as not to cause any damage to the flora and fauna during mining operations.
33. The commitments made in the public hearing are to be fulfilled by the PP.
34. Fund should be exclusively earmarked for the implementation of EMP through a separate bank account.
35. PPE's such as helmet, ear muffs etc should be provide to the workers during mining operations.

(C) ENTIRE LIFE OF THE PROJECT

36. In the proposed EMP, capital cost is Rs. 25.86 Lakh is proposed and Rs.13.24 Lakh /year as recurring expenses.
37. Under CSR activity, Rs. 2.0 Lakh /year are proposed as capital and recurring expenses respectively in different activities and should be implemented through respective committees.
38. The environment policy of the company should be framed as per MoEF&CC guidelines and same should be implemented through monitoring cell. In case the allocated EMP budget for mitigative measures to control the pollution is not utilized fully, the reason of under utilization of budgetary provisions for EMP should be addressed in annual return.
39. A separate bank account should be maintained for all the expenses made in the EMP activities by PP for financial accountability and these details should be provided in Annual Environmental Statement.
40. PP shall be responsible for discrepancy (if any) in the submissions made by the PP to SEAC & SEIAA.
41. PP will comply with all the commitments made vide letter dated 13.08.2020.
42. The validity of the EC shall be as per the provisions of EIA Notification subject to the following: Expansion or modernization in the project, entailing capacity/ built-up area/ project area, addition with change in process and or technology and any change in product - mix in proposed mining unit shall require a fresh Environment Clearance.

6. Case No 7410/2020 M/s Vandanaa Energy & Steels (P) Ltd, Plot No. 10/36, Near Raj Bhawan, Civil Lines, Dist. Raipur, CG - 492001 Prior Environment Clearance for Manganese Ore Deposit in an area of 9.915 ha. (4680 Tonne per annum) (Khasra No. 158/1, 159/1, 172/1, 173/1), Village - Miragpur, Tehsil - Khairlanji, Dist. Balaghat (MP)

This is case of Manganese Ore Deposit. The application was forwarded by SEIAA to SEAC for appraisal. The proposed site at (Khasra No. 158/1, 159/1, 172/1, 173/1), Village - Miragpur, Tehsil - Khairlanji, Dist. Balaghat (MP) , Area - 9.915 ha. (4680 Tonne per annum). The project requires prior EC before commencement of any activity at site.

The case was presented by the PP and their consultant wherein PP stated that this is a fresh case and mining will be carried out by open cast other than fully mechanised method. The Manganese ore is occurring as thin inclined band. The drilling and blasting of exposed Mn ore band by jack-hammer operated compressor. After removal of lateritic soil , OB and mica schist by using scrapper-dozer/shovel –dumper combination to the specified dump sides. The blasted material of ROM will be reduced to loadable size and the ROM will be transported to surface by manual loading into tippers. The mining operations are proposed in the southern part of the

applied area with four to five benches. The bench advancement will be north south and pit advancement will be towards east. The haulage roads 12-15m wide will be constructed at required places it will be laid at maximum 1:16 gradient from surface stack yard to pit bottom. Presently 4 old pit have been observed in lease area which is covering about 0.6350 ha area. At the end of conceptual period, 2.707ha area will be excavated upto 342m MSL. Details of existing pit are given below

Pit no.	Length-m	Width-m	Depth-m	Area in sqm
Pit-1	65	40	5	2600
Pit-2	20	15	4	300
Pit-3	35	20	5	700
Pit-4	55	50	5	2750
Total				6350

It was observed that being it's a case of major mineral i.e. Manganese Ore, it was decided to consider this case as B-1 category and committee recommended to issue standard TOR prescribed by the MoEF&CC may be issued for conducting the EIA with following additional TORs and as per conditions mentioned in Annexure-D:

1. Detailed protection plan to be submitted as ore bode traversing towards village side and drilling and blasting of exposed body is proposed, also mentioned regarding distance to be left in this context.
2. Detailed protection plan for nearby human settlements.
3. Some trees are in existing in the lease area thus PP should submit inventory of all the existing trees and if tree falling is proposed same should be discussed in EIA report.
4. Detailed evacuation plan with transport route, required infrastructure and man-power is to be discussed in the EIA report.
5. If on the evacuation route there are human settlements justify how they will be protected or suggest alternate evacuation route.
6. Transportation plan & traffic management plan should be discussed in the EIA report.
7. Inventory of all sensitive receptors in 2 Km & 5 Km around the mine.
8. Mine water discharge plan with details of garland drains and settling tanks should be detailed out on a map in the EIA report.

9. Apart from air, surface and G.W. monitoring other Environmental Monitoring parameters should be conducted in such a way that from all soil samples heavy metal should be analysed and atleast in one sample analysis of pesticides should conducted.

7. <u>Case No 7412/2020 M/s Rini Life Science Pvt. Ltd, Mr. Ankit Kumar Chordia, HPA, 120 MT Cloth Market, Mahaveer Chowk, Dist. indore, MP – 452002 Prior Environment Clearance for Expansion in Production Capacity from 15 MTA to 600 MTA of Synthetic Organic Chemical (API and Pharmaceutical Intermediates Products) at R.R. Industrial Area, Behind Shivna Spinners, Tehsil - Sanwer, Dist. Indore (MP) Category: 5(f) Synthetic Organic Chemicals Project. Env. Con. — Creative Enviro Services, Bhopal (M.P.).</u>

This is a case Prior Environment Clearance for Expansion in Production Capacity from 15 MTA to 600 MTA of Synthetic Organic Chemical (API and Pharmaceutical Intermediates Products) at R.R. Industrial Area, Behind Shivna Spinners, Tehsil - Sanwer, Dist. - Indore (M.P.). The proposed project falls under item no 5(f) i.e. Synthetic organic chemicals hence requires prior EC from SEIAA before initiation of activity at site.

This case was presented by PP and their consultant wherein PP has submitted following salient features of the project:

Salient Feature of Project

- M/s RLSPL has proposed to increase the manufacturing capacity of Bulk Drugs & Intermediates (API) with annual capacity of 585 MT. The existing capacity is 15 TPA. The total capacity after expansion will be 600 MTPA The nature of the project falls under synthetic organic chemicals category.
- The unit will manufacture bulk drug and drug intermediates for 600 TPA .The project occupies a plot Area of 8425.17m^2 sq mt of land. The total fixed cost of the project is estimated as INR 7.5 Crore.
- The major facilities involved are Boiler, MEE, Reactors, Cooling Towers, Effluent Treatment Plant (ETP), and R.O Plant Facilities like administrative office, parking and greenbelt/plantation will also be developed as per plan/requirement.
- The total water requirement for the project is approx. 110 KLD which will be sourced through water supplier ., whereas after recycling and reuse total fresh water requirement will be 60 KLD. Total waste water generation will be 60 KL/day, which will be and treated in ETP of 75 KLD.
- RLSPL will install Multi Effective Evaporator, and RO pplant with treatment capacity of 5cum/hr of each. The treated water will be used for cooling towers, floor washing and gardening/green belt.
- Solid waste generated during the manufacturing process and wastewater treatment process is mainly sludge and will be disposed at authorized TSDF facility, as per Hazardous and Other Waste (Management & Transboundary Movement) Rules, 2008 (Amendment 2016). M/s RLSPL will take authorization Under Hazardous Waste (Management, Handling & Transboundary Movement), Rules.

- Power will be sourced from existing line of 'Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company'. The total requirement will be 1600 KVA. In case of power failure, D.G. set (existing 125 KVA and proposed 500 KVA) will be used as a backup power source.
- The M/s RLSPL will have total manpower of approx. 200 who will be from Pithampur and nearby villages/area and therefore no residential planning has been incorporated..
- The total estimated cost of the proposed project Rs. 7.5 Crore out of which . Rs. 97.80 Lacs (capital cost) is allocated for environmental management systems and the annual recurring cost for the same is Rs 16.80+35 Lacs .

Salient Features			
S.N.	**Component**	**Status**	
1	**Name**	M/s. Rini Life Science Pvt. Ltd.	
2	Location	R.R. Industrial Area, Behind Shivna Spinners, Tehsil. Sanwer, Distt. Indore - 452 015 (MP)	
3	Product type	Active Pharmaceutical Ingredients (APIs)	
4	Project Type	Expansion	
5	Schedule / Project Activity No. - as per EIA notification	5 (f) Synthetic Organic Chemicals As per EIA Notification 2006, and Amendments thereof. \vide S.O. 1223 (E), dated 27/03/2020, API Products shall be appraised as "Category - B2"	
6	Category of Project	MSME	
7	**Area Details in Sq Meter**		
i	Total Plot Area	8425.17m^2	
ii	Built up Area	3373.02 m^2	
iii	Green belt Area	2,780 m^2 (approx. 33 % land area)	
8	**Production Details**		
i	Production Capacity	Production Capacity of API & Pharmaceutical Intermediates, Existing: 15 MT/Anum Proposed: 585 MT/Anum Total after expansion: 600 MT/Annum	
9	**Budgetary Allocation**		
i	Project Cast	7.5 Crores in primary phase	
ii	EMP Cast		
	Capital cost	97.80 Lacs	for EMS viz. ETP, MEE, APCM etc
	Annual recurring cost	16.80 Lacs	
ii	Annual re-occurring cost	35 Lacs	for EMS - O&M and monitoring etc
iii	CER Activities	7.5 Lacs	
10	**Power Requirement**		
i	Proposed Connected Load(KW)		

ii	Total Power Requirement	1600kva	
iii	Source	MPEB	
11	**Fuel Requirement**		
A	Existing		
i	Agro Waste for Boilers (0.65 TPH)	30 kg/hr	
ii	HSD for DG Set (125 kVA) *	24 lit./hour	
B	Proposed		
i	Briquette/Coal for Boilers (2 TPH)	6 T/day	
ii	Briquette/Coal for Boiler (1.5 TPH)	4 T/day	
iii	HSD For DG Set (500 kVA) *	96lit/hour	
12	**DG Set Details**		
i	DG Set (1No.)- Existing	125 kVA	
ii	D.G. Set (1No.)- Proposed	500KVA	
13	**Utility Capacity**		
		Capacity	Type of fuel
i	Exiting Steam Boiler	0.65 TPH	Agro Waste
ii	Proposed Steam Boiler	2.0 TPH	Briquette/Coal
iii	Proposed Steam Boiler	1.5 TPH	Briquette/Coal
14	**Scrubber Details**		
i	Acid scrubber	1200 CMH	
ii	Alkali Scrubber	1200 CMH	

List of Products

Existing Products & Production Capacity			
S.N.	Name of Existing Products	Quantity* (MT/Anum)	Major Uses/ End Use
A	Anti-Diabetic Drug		
	Glipizide		Anti-diabetic
	Alendronate sodium		Osteoporosis
	Ketamine HCl		Anesthetic drug
	Glimepiride		Anti-Diabetic
	GRAND TOTAL	**15**	

❖ Proposed Products & Production Capacity			
S.N.	**Name of Proposed Product**	**Quantity** (MT/Anum)**	**Major Uses/ End Use**
(A)	Anti-Diabetic Drug		
1	Alogliptin and Intermediates		Anti-diabetic drug
2	Canagliflozin		Treatment of diabetes
3	Empagliflozine		Treatment of type 2 diabetes
4	Gliclazide		Treatment of type 2 diabetes
5	Glimepiride and Intermediate		Anti-diabetic
6	Vildagliptin and intermediate		Antidiabetic agent
7	Sitagliptin		Antihyperglycemic
8	Saxagliptin		Hypoglycaemic
9	Tenlegliptin		Antidiabetic agent
10	Calcium dobesilate		Diabetic retinopathy&haemorrhoids
11	Dapagliflozin		Blood sugar treatment
	Sub-Total	160	
(B)			
1	Rosuvastatin calcium		Treatment of Hypertension
2	Chlorzoxazone		Skeletal muscle Relaxant
3	Mefenemic acid		Anti-inflammatory
4	Levetiracetam		Anti-hypertensive
	Sub-Total	360	
(C)			
1	Azilsartan and Intermediate		Cardiovascular disease.
2	Chlorthalidone and intermediate		High blood pressure and enema
3	Benidipine hydrochloride		Antihypertensive
4	Cilnidipine		Antihypertensive
5	Finofibrate		Antihypertensive
6	Torsemide		High Blood Pressure
7	Perindopril		High Blood Pressure
8	Betoxolol and Intermediate		Antihistamine
9	Lercanidipine		Respiratory disease
10	Olmesartan		Bronchodilator
11	Acebrophylline		Respiratory disease
12	Ambroxol Hydrochloride		Antihistamine
13	Voriconazole		Antifungal
14	Levocetirizine		Antihistamine
15	Montelukast		Allergic, Asthma
16	Baclofen		Muscle Relaxant
17	Roflumilast		Anti-inflammatory
18	Meloxicam		Anti-inflammatory
19	Famotidine		Treat peptic ulcer disease,
20	Nitrofurantoin		Anti-bacterial
21	Nitrofurazone		Anti-bacterial
22	Moxifloxacin		Antibiotic
23	Nitazoxanide		Antiparasitic
24	Alendronate sodium		Osteoporosis

25	Allopurinol and intermediate		Treat gout
26	Apixaban and intermediate		Anticoagulant
27	Aprepitant and intermediate		Vomiting
28	Bisacodyl		Laxative
29	Dabigartan and intermediate		Anticoagulant
30	Diacerin and intermediate		Osteoarthritis
31	Luliconazole		Antifungal
32	Fabuxostat		Treat gout
33	Silver Sulfadiazine		Topical Anti-bacterial
34	Tadalfil and intermediate		Erectile dysfunction
35	Trenexamic acid and intermediate		Excessive blood loss
36	Bepotestine hydrochloride/besilate		Allergic
37	Quetiapine hemifumarate		Antipsychotic
38	Brinzolamide		Glaucoma
39	Phenylephrine Hydrochloride		Relieves a stuffy nose
40	Sodium Picosulpahte		Laxative
41	Levosulpride		Antipsychotic
42	Dorzolamide & Intermediates		Glaucoma
43	Remdesivir		Antiviral (covid-19)
	Sub-Total	60	
(D)			
1	Adapelene and its Intermediate		Treatment of acne
2	Glycopyrrolate		Anticholinergic
3	Granisetron		Antiemetic
4	Tamsulosin hydrochloride		Prostatic hyperplasia
5	Ticagrelor and intermediate		Antagonist
6	Thyroxine sodium		Treat thyroid hormone deficiency
7	Voglibose		Diabetes
8	Melatonin		Trouble sleeping
9	Rupatidine		Antagonist
10	Fingolimod		Immunomodulating drug
11	R&D Product		NA
	Sub-Total	**20**	
	Total Finished product	**600**	

	By-product /Non-EC product		
S.N.	**Name of Proposed By-product /Non-EC product**	**Quantity (MT/Anum)**	**Major Uses/ end uses**
(E)	By-product /Non-EC product		
E1	Potassium bicarbonate	26	Various chemical manufacturing unit/ unit/ other actual end users***
	Hydrochloric acid		
E2	Ammonium chloride	147	
	Ammonium sulphate		
E3	Acetic Acid	9.0	
	Chromium sulphate		
E4	Sodium Bromide	9.0	

	Imidazole		
E5	Triethylamine hydrochloride	9.0	
	Sub- total	200 TPA	

- The total water requirement is about 100 to 110 KLD and waste water generated from the plant will be about 52 to 63 KLD. Out of this about 35 to 42 KLD will be HTDS from Process, Boiler blow down & Scrubber System and 17 to 21 KLD LTDS from Process, Washings, R&D, QC & Cooling towers and from Domestic/ Sewage will be collected by gravity from all sources into separate collection tanks.
- HTDS Effluent will be sent to Multiple Effect Evaporator (MEE) with Stripper column followed by Agitated Thin Film Dryer (ATFD). The Condensate from MEE & LTDS Effluents will be sent to Biological ETP.
- After Pretreatment effluent will be sent to RO System. After RO Treatment, permeate will be reused for Cooling Towers makeup and rejection will be back to the MEE System. The MEE Salts generation from ATFD, which will be collected and sent to TSDF.
- As per process flow diagram, the waste water generated from different units will be collected in a separate collection tanks (LTDS, HTDS, Domestic waste water).
- The water from LTDS collection tank will be pumped into flash mixer for physio-chemical treatment, the overflow from flash mixer is passed into Primary Clarifier for sedimentation, the overflow from Primary Clarifier will be passed into Aeration Tank for biological treatment, the domestic waste water is pumped into aeration tank for treatment & the condensate (after recovery) from Stripper, Multiple Effect Evaporator will also be transferred to Aeration Tank for further treatment.
- The biological treated water is given tertiary treatment and then passed into Reverse Osmosis System
- Total Industrial Effluent will consist of High COD/TDS & low COD/TDS stream.
- The High COD/TDS process effluent (8 KLD) and RO Reject (7 KLD) will be treated through MEE/ ATFD. The MEE condensates to the tune of 13 KLD will be recycled/ reused and MEE bottom will be sent to TSDF site
- The Low COD/TDS effluent, [consisting, process effluent (22 KLD), Utility blow down (5 KLD), washing (4 KLD), From Other (Scrubber + Softener/ MEE/DM Plant + R&D/QC/RO1) : 1+2+1+7 =11 + 2*= (13 KLD)] will be treated in an on-site ETP followed by RO system.
- The treated effluent (35+2=37 KLD) will be reused/ recycled and the RO reject (7 KLD) will be sent MEE/ATFD as stated above. Total recycled water 50 KL.

During discussion committee asked PP regarding compliance of earlier EC conditions for which PP submitted that this unit was established prior inactment of EIA Notification, 2006 and was operation on the basis of consent from the M. P. Pollution Control Board. It was further discussed that Hydrochloric acid and Acetic Acid which are mentioned as by- products are actually intermediate products and will be reused in the process within the plant premises. The water supply is proposed through tankers for which PP submitted that at present water demand will be meeting through tankers but in near future, water supply is proposed through Narmada water supply and whenever, this water is available, we shall shift to that. After presentation, PP was asked to submit of following details:

1. Regarding end use of by product i.e. Hydrochloric Acid and Acetic Acid.

2. Regarding use of briquette coal in the boiler.

PP vide letter dated 13.08.2020 submitted reply of the above query. The query reply was placed before the committee, after deliberations, the submissions and presentation made by the PP were found to be satisfactory and acceptable hence the case was recommended for grant of Prior Environment Clearance for Expansion in Production Capacity from 15 MTA to 600 MTA of Synthetic Organic Chemical (API and Pharmaceutical Intermediates Products) at R.R. Industrial Area, Behind Shivna Spinners, Tehsil - Sanwer, Dist. Indore (MP) Category: 5(f) Synthetic Organic Chemicals Project ,subject to the following special conditions:

(A) Statutory compliance:

1. 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 Madhya Pradesh Pollution Control Board (MPPCB).
2. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.
3. The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.

(B) Air quality monitoring and preservation

1. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to MPPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
2. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.
3. To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Sulphur content should not exceed 0.5% in the coal for use in coal fired boilers to control particulate emissions within permissible limits (as applicable). The gaseous emissions from the boiler, DG set

and scrubber shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.

4. Storage of raw materials, coal etc shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
5. The DG sets (1X125 KVA-existing, 1 X 500 KVA-Proposed) shall be equipped with suitable pollution control devices and the adequate stack height so that the emissions are in conformity with the extant regulations and the guidelines in this regard.
6. National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended from time to time shall be followed.
7. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 161h November, 2009 shall be complied with.

(C) Water quality monitoring and preservation

1. The project proponent shall provide online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
2. As already committed by the project proponent Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.
3. The High COD/TDS process effluent (8 KLD) and RO Reject (7 KLD) will be treated through MEE/ ATFD. The MEE condensates to the tune of 13 KLD will be recycled/ reused and MEE bottom will be sent to TSDF site
4. The Low COD/TDS effluent, [consisting, process effluent (22 KLD), Utility blow down (5 KLD), washing (4 KLD), From Other (Scrubber + Softener/ MEE/DM Plant + R&D/QC/RO1): 1+2+1+7 =11 + 2*= (13 KLD)] will be treated in an on-site ETP followed by RO system.
5. The treated effluent (35+2=37 KLD) will be reused/ recycled and the RO reject (7 KLD) will be sent MEE/ATFD as stated above. Total recycled water 50 KLD
6. Adhere to 'Zero Liquid Discharge and No industrial effluent from the unit shall be discharged outside the plant premises. PP should also install Internet Protocol PTZ camera with night vision facility along with minimum 05X zoom and data connectivity must be provided to the MPPCB's server for remote operations.
7. The effluent discharge shall conform to the standards prescribed under the Environment (Protection) Rules, 1986, or as specified by the Madhya Pradesh Control Board while granting Consent under the Air/Water Act, whichever is more stringent.

8. Total fresh water requirement shall not exceed 60 KLD and tanker water supply shall be used till the Narmada water supply will be available. .
9. Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.
10. The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and utilize the same for different industrial operations within the plant.
11. Dedicated power supply shall be ensured for uninterrupted operations of treatment systems.

(D) Noise monitoring and prevention

1. Acoustic enclosure shall be provided to DG (125 KVA and 500 KVA) set for controlling the noise pollution.
2. The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation.
3. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

(E) Energy Conservation measures

1. The energy sources for lighting purposes shall preferably be LED based.
2. The total power requirements for project will be 1600 KVA . The power will be supplied by Madhya Pradesh Electricity Board. Furnace Oil Consumption 96lit/hours, whereas the coal consumption will be 10 TPD for both boiler of 2 TPH and 1.5 TPH. (Source Indigeneous)

(F) Waste management

1. Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm and the solvent transfer through pumps.
2. As proposed, 95% solvent recovery shall be achieved and recovered solvent shall be reused in the process.
3. Hazardous wastes such as spent solvents, organic incinerable wastes/residues, used filter bags, packaging materials, rejected/expired raw materials and off specification/

rejected finished products from the manufacturing plants shall be directly sent to CTSDF, Dhar.

4. The Fly ash generated from boilers shall be stored in silos and disposed of through cement manufacturers by bulkers / closed containers and should comply with Fly Ash Utilization Notification, 1999 and as amended subsequently.
5. If any Flammable, ignitable, reactive and non-compatible wastes should be stored separately and never should be stored in the same storage shed.
6. Automatic smoke, heat detection system should be provided in the sheds. Adequate fire fighting systems should be provided for the storage area.
7. In order to have appropriate measures to prevent percolation of spills, leaks etc. to the soil and ground water, the storage area should be provided with concrete floor of inert material or steel sheet depending on the characteristics of waste handled and the floor must be structurally sound and chemically compatible with wastes.
8. Measures should be taken to prevent entry of runoff into the storage area. The Storage area shall be designed in such a way that the floor level is at least 150 mm above the maximum flood level.
9. The storage area floor should be provided with secondary containment such as proper slopes as well as collection pit so as to collect wash water and the leakages/spills etc.
10. Storage areas should be provided with adequate number of spill kits at suitable locations. The spill kits should be provided with compatible sorbent material in adequate quantity.
11. Recent MSDS of all the chemicals used in the plant be displayed at appropriate places.
12. Proper fire fighting arrangements in consultation with the fire department should be provided against fire incident.
13. All the storage tanks of raw materials/products shall be fitted with appropriate controls to avoid any spillage / leakage. Bund/dyke walls of suitable height shall be provided to the storage tanks. Closed handling system of chemicals shall be provided.
14. Log-books shall be maintained for disposal of all types hazardous wastes and shall be submitted with the compliance report.
15. Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.
16. The company shall undertake waste minimization measures as below:

    a. Metering and control of quantities of active ingredients to minimize waste.

b. Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
c. Use of automated filling to minimize spillage.
d. Use of Close Feed system into batch reactors.
e. Venting equipment through vapour recovery system.
f. Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(G) Green Belt

1. The green belt of 5-10 m width shall be developed 2780 sq. meter within plant and 600 along the road in the project area, mainly along the plant periphery, in downward wind direction and along road sides etc. Selection of plant species shall be as per the CPCB guide lines in consultation with the State Forest Department.
2. Peripheral plantation all around the project boundary shall be carried out using tall saplings of minimum 2 meters height of species which are fast growing with thick canopy cover preferably of perennial green nature. As proposed 600 no of plants in one year's shall be planted. PP will also make necessary arrangements for the causality replacement and maintenance of the plants.

(H) Safety, Public hearing and Human health issues

1. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
2. The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.
3. The PP shall provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
4. Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.
5. 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, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

6. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
7. There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places.

(I) Corporate Environment Responsibility

1. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
2. The company shall have a well laid down environmental policy duly approve 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 MoEF&CC as a part of six-monthly report.
3. 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 to the head of the organization.
4. Fund should be exclusively earmarked for the implementation of EMP through a separate bank account.
5. The proposed EMP cost is Rs. 97.80 Lakhs as capital and 16.80+35 Lakhs /year as recurring cost.
6. Under CER activity, Rs. 7.5 Lakhs as capital costs has proposed for different activities. PP shall comply with the commitment of providing infrastructure facility at school.
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. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

8. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

(J) Miscellaneous

1. PP shall be responsible for discrepancy (if any) in the submissions made by the PP to SEAC & SEIAA.
2. The project authorities must strictly adhere to the stipulations made by the MP Pollution Control Board and the State Government.
3. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
4. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
5. 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.

8. Case No 6788/2020 M/s Nakoda Construction Company, Partner - Shri Ahhay Jain, 3-4, Diamond Colony, Dist. Indore, MP – 452001 Prior Environment Clearance for Construction of Proposed "Golden Palm" (Total Plot Area – 30,687.30 sqm, Total Proposed Built up Area – 50,765.88 sqm) at Khasra No. – 200/1, 201, 203, 204, 206, 207, 214/1, 214/2, Village - Niranjanpur, Tehsil - Indore, Dist. Indore, MP.Category: 8(a) Building & Construction Project.

This is case of Prior Environment Clearance for Construction of Proposed "Golden Palm" (Total Plot Area – 30,687.30 sqm, Total Proposed Built up Area – 50,765.88 sqm) at Village - Niranjanpur, Tehsil - Indore, Dist. Indore, M.P. Cat. - 8(a) Building and Construction Projects.

Earlier this case was scheduled for presentation and discussion in 433rd SEAC meeting dated 19/05/2020 wherein ToR was recommended.

The project details are as given below-

The "Golden Palm" Group Housing (Residential Project) at Khasra 200/1,201, 203, 204, 206, 207, 214/1, 214/2, Village-Niranjanpur, Tehsil & Dist. Indore, MP is proposed by "M/s. Shree Nakoda Construction Company" Address: 3-4, Diamond Colony, Indore, M.P in which total 888 units are proposed where 840 units are already constructed and 48 are remaining for construction. At present there are 462 units in which possesion have been already given nearly 52 % of the total proposed units. This case was submitted to SEIAA on 03.08.2017 which is between the violation window periods between 14.03.2017 to 13.04.2018. During discussion and perusals of the documents it was observed by the committee that it is a case of violation of EIA Notification, 2006 as PP has already started construction activities. Committee observed that according to the latest MoEF &CC Notification dated 09/Sep/2019 only those proposals of violation may be taken up for consideration under the provisions of MoEF&CC notifications on no. F/22-10/2019-1d-III dated 22.09.2019 dated 14/03/2017 to 03/09/2017 & 08/03/2018 to 13/04/2018.

PP has submitted the EIA report vide letter dated 21/07/20 which was forwarded through SEIAA vide letter no. 1875 dated 25/07/2020, which was placed before the committee.

The EIA was presented by the PP and their consultant with site specific details as are given below:

The chronology of the project:

I. Master Plan approved by Directorate of Town and Country Planning, Madhya Pradesh on dated 09.03.2011
II. Construction was started on Feb. 2012.

Type of dwelling Units	Total Unit Proposed	Possession given	Unit Incomplete	Unit Completed
Flats units	888	462 (Nearly 75 %)	48	840

Proposal submitted to SEIAA	EDS by SEIAA	Submission of EDS	Accepted by SEIAA	Hardcopy submission	SEAC Agenda
03/08/2017	16/04/2018 17/05/2019	15/05/2019 03/01/2020	30/01/2020	03/02/2020	433rd SEAC meeting dated 19/05/2020

Proposed Residential Building Project of M/s. Nakoda Construction Company	
Total Land Area	37650.00 sq. mtrs.
Total Built up Area	50765.88 sq.mtrs
Land Owner of the Project	M/S Nakoda Construction Pvt Ltd.
Promoters of the Project	Mr. Abhay Jain
Location of Project	Khasra 200/1,201, 203, 204, 206, 207, 214/1, 214/2, Village-Niranjanpur, Tehsil & Dist. Indore, Madhya Pradesh
Occupancy of land	Owned by PP

Geological Location	Latitude 22°46‘42.96"N Longitude 75°53‘12.58"E
Surrounding Features	(a) East - Residential buildings (b) West -Agricultural Land (c) North – Residential buildings (d) South – Scheme No. 136

Facility	Residential Building
Total Water Requirement	600 KLD
Net Fresh Water Requirement	385 KLD
Total Waste Water Generation	480 KLD
STP Capacity	550 KLD
Power Requirement	3500 KW
Backup Power facility	30 KVA x 13
Solid Waste generation	2240 KG per day
Height of buildings	18 mtrs
Front MOS	9 M
Rear MOS	7.5 M
Width of main assess	12 M

Parking area	19690.00 sqm
Parking Number	656 ECS
Area under Green belt	3765.00 m^2
Project Cost	71.00 Cr
Building Confr.	G + 6

S.NO.	PARTICULARS	AREA	UNIT
1	Plot Area	37650.00	Sq.m
2	Area for Road Widening	3526.70	Sq.m
3	Net Planning Area	3.687.30	Sq.m

S.No.	Particular	Area in Sq.M	%
1	Ground Coverage	10126.80	33.0
2	Greenbelt Area	3765.00	12.3
3	Open area	3168.00	10.3
4	Road and other utilities Area	13627.5	44.4
Total		30687.30	100

PP further stated that 100 % construction have been done and possession given to 462 (Nearly 75 %). During EIA presentation it was observed by the committee that PP has proposed Rs. 15,95,500 as cost of remediation and natural community resource augmentation plan. Following is the remediation plan and natural community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation:

S. No.	Environmental Factors/ Attributes	Remedial Plan/Augmentation Plan	Remedial Cost (in INR)		Environmental Management Plan	EMP Cost (in INR)/year		Remark
			Capital Cost	Recurring Cost		Capital Cost	Recurring Cost	
1	**Land use as per approved Master plan by T&CP, Bhopal**							
	Construction Phase	No Violation				--	--	--	Land use of the project site was Residential as per Indore Master Plan 2005 attached **Annexure - II**
	Operation Phase	No Violation				--	--	--	
2	**Environmental Sensitive places, land acquisition status, resettlement & rehabilitation (R&R)**							
	Construction Phase	No Violation				--	--	--	Project involves no R&R issues. The Project is on joint Venture. Joint Venture Papers are attached. **Annexure III**
	Operation Phase	No Violation				--	--	--	
	Baseline Environment Monitoring							

3	**Construction Phase**	For monitoring of air, water, soil & noise every six month for period of two years 1. Water: 4 GW sample @ 5000/sample 2. Air: 4 Sample @ 5000/sample, DG 2 sample @ 7500/sample 3. Noise: 2 sample @ 1000/sample, DG set 2 sample @ 1000/sample 4. Soil: 2 sample @ 4000/sample	**3,78,000**		For monitoring of air, water, soil & noise every six month 1. Water: 4 GW sample @ 5000/sample 2. Air: 4 Sample @ 5000/sample, 7500/sample 3. Noise: 2 sample @ 1000/sample, DG set 2 sample @ 1000/sample 4. Soil: 2 sample @ 4000/sample	NA		No environment monitoring was done at site on initial starting of the project since the project began in 2013. Hence **2013-14, 2014-15, 2015-16, 2016-17, 2017-18& 2019-2020.**This remediation plan is of **5 years**. The Remediation plan of Rs. 3,78,000 will be spent inside the project premises or outside the premises of the project in Plantation /Env

								Monitoring
	Operation Phase	For monitoring of air, water, soil & noise every six month for period of five years 1. Water: 2 GW sample @ 5000/sample 2. Air: 2 Sample @ 5000/sample, 3. Noise: 2 sample	NA	NA	For monitoring of air, water, soil & noise every six month 1. Water: 2 GW sample @ 5000/sample 2. Air: 2 Sample @ 5000/sample, DG 1 sample @ 5000/sample 3. Noise: 2 sample @ 1000/sa	NA	**1,50,000**	

		@ 1000/sample, DG set 1 sample @ 1000/sample 4. Soil: 2 sample @ 4000/sample			mple, DG set 1 sample @ 1000/sample 4. Soil: 2 sample @ 4000/sample			
4	**Air Environment**							
	Construction Phase	Water sprinkling	Water sprinkling is done as per terms & conditions of the work order agreement (3 water tractors/day) enclosed with bill as (Annexure-VI) &Barricading is on site done and exist, enclosed photograph as Annexure-VII).		Construction period= 4 years, working day= 800 day, Per day water requirement= 12000 KLD @ 320/ tanker	INR 7,68,000	--	**All bills submitted in hard copies to SEAC**
		Container for Storage of raw material	Storage hall/Service Yard (Size-35mx25m) was provided during construction phase for materials stacking	No Violation	--	INR 90,000	INR 7000	**All bills submitted in hard copies to SEAC**
		Green Nets for covering building for 37650.00 Sqm area @ Rs 3.5/Sqm	**1,31,775**		--	--	--	Proof is not available, therefore cost is taken in Remediation Cost

		Barricading of construction area	Site was fully barricaded (Annexure-VIII). All modern and new machinery was used on site. **NO VIOLATION**	Site boundary constructed	Construction is completed now. Project is in operational phase.	INR 15,48,000	--	Bills submitted in hard copies
		Helmets, jackets, hand gloves & boots has been provided to the workers, enclosed Bill receipt as (Annexure-IX)			--	INR 30,15,395	--	Photographs & ledger accounts are attached for the reference
		Vehicle Inspection @ 15,000/ year for 4 years	60,000		--	--	--	Proof is not available, therefore cost is taken in Remediation Cost
	Operation Phase	DG sets 250 kVA. With prevention of combustion fumes. Acoustic encloser				INR 12,50,000	INR Annual maintenance @22865	Maintenance of 1 no. of DG set/year through AMC @ 22,865/year

		and stack height has been provided as per CPCB Norms						
5	**Waste Environment**							
	Construction Phase	150 Dustbin @ Rs 200/each	30,000		--	2,17,000	--	Proof is not available, therefore cost is taken in Remediation Cost
		Safety tapes for barricading the waste	10,000		--	--	--	
		Agency fee for collection & disposal Solid waste for 2 years @ Rs. 1000/month	24,000		--	--	--	
	Operation Phase	15 Dustbin @ Rs 300/each	4,500		Agency fee for collection & disposal Solid waste @ Rs. 100/month	1,50,000		MUNICIPAL CORPORATION NOC ATTACHED FEES IS INCLUSIVE OF PROPERTY TAX also NOC

		Agency fee for collection & disposal Municipal Solid waste		50,000		--	12,000	Attached of MSW Disposing **ANNEXURE - V**
		STP sludge disposal	No Violation	No Violation	STP sludge disposal	Will be used as manure	--	Sludge is being used for landscaping purpose.
6	**Water Environment**							
	Construction Phase	Ground water abstraction	No ground bore well is done. **NO VIOLATION** (Under Taking annexure V)		NA	Not applicable, till date no bore well for ground water tapping is proposed for construction.	NA	For operational phase builder has arranged water from tankers on daily bases bills are attached for further reference. Photographs are attached herewith for your reference
		Construction of Toilets	Temporary shelter & toilets has been provided to workers enclosed pics as (Annexure-X)	No Violation	NA	INR 10,56,246.00	NA	Bills submitted in hard copies.

		STP & Duel Plumbing installation of 550 KLD	Water Demand is being fulfilled by Municipal Water SupplySewage Water is treating in 550 KLD STP and Recycled and reuse for Greenbelt, Flushing purposes.dual plumbing is done and operational.	No Violation	NA	INR 9000000(STP)+3403243(Dual plumbing)= 1,24,03,243		STP is constructed, Photos attached A**NNEXURE –VIWe have already obtained municipal water supply permission which is attached for reference.**
		Construction of 6 RWH	6.0 nos of rain water harvesting has been provided.**NO Violation**	No Violation	NA	INR 34,72,000		6 RWH pits are constructed & CGWB compliance to be done.
	Operation Phase	Abstraction of Ground water	No Violation	No Violation	NA	NA	NA	Water is being supplied through Municipal Supply. NOC is attached as **Annexure VII**
		STP & Duel Plumbing AMC &Maintainance of 550 KLD	No Violation	No Violation	STP operation and maintenance @ Rs 45,000/ month	NA	**INR 540000(STP AMC @ 45000rs/month)+ 168389 (Dual plumbing) = 708389.16**	STP is FULL functional. Photos of STP Attached **Annexure VIII**

		Maintenance and cleaning of RWH system	No Violation	No Violation	Maintenance and cleaning of RWH system @ Rs 32,000/ twice in a year	NA	INR 32000 (Recurring cost for the maintenance of RWH pits.)	Bills are Submitted .
		Cleaning and maintenance of water network @ Rs 50,000/twice in a year	No Violation	No Violation	Cleaning and maintenance of water network @ Rs 50,000/ twice in a year	NA	**2,00,000**	
7	**Occupational Health and Safety of construction worker**							
	Construction Phase	First aid kit at site	**50,000**		--	--	--	Proof is not available, therefore cost is taken in Remediation Cost
		PPE for labor	**50,000**		--	--	--	
		Health checkup for labor twice in a year for 50 LABOR @ 1000/ labor	**50,000**		--	--	--	
	Operation Phase	--			--	--	--	
8	**Ecology Environment**							
	Construction Phase	Cutting of Trees	No Tree Falling done **No Violation**	No Violation	--	--	--	No tree was felled. No

								tree was present on the land. Attached affidavit **Annexure - I**
		Development of Green Area	Total 300 trees planted during construction. Species wise and location wise inventory enclosed as (Annexure-XIII) INR 2,50,000 (An additional plantation will be done as suggested by the committee members.)			INR 9,87,412	INR 1,90,546	Green area will be developed in the project site. Plantation photos attached **Annexure - IX**
	Operation Phase	Maintenance of green area for 1 years after plantation	No violation	No Violation	Maintenance of green area for @ 2,40,000/annum	--	**2,40,000**	Gardner is allocated for maintenance of landscape.
9	**Soil Environment**							
	Construction Phase	Soil characteristics are as per baseline environmental data. total land area 37650 sqm, ground	No violation as entire top soil was used in garden and back filling of plinth area.		NA	INR 5,63,849.00		Ledger accounts are submitted in hard copies.

		coverage @ 30%= 10126 SqM, excavated material = 11521 cum, total quantity of topsoil have been used for the development of garden area which is 3765.00 Sqm i.e. 10% of total plot area.						
	Operation Phase	--			--	--	--	Proof is not available, therefore cost is taken in Remediation Cost
	Noise Environment							
10		Ear plugs for labour @ Rs 100/pcs (1000 pcs)	1,00,000			--	--	Proof is not available, therefore cost is taken in Remediation Cost

	Operation Phase	Replacement of Vibration pads of DG set (once in five years)	1,50,000		Replacement of Vibration pads of DG set			Five years not completed yet. Hence cost is not taken in remediation cost
11	**Energy Conservation**							
	Construction Phase	--			--	--	--	
	Operation Phase	Installation of LED	No Violation		--	INR 9,56,981	INR 1,89,634 (This amount has been incurred for the maintenance point of view.)	Proof is available photographs attached **ANNEXURE XI**
		Solar Panel	Solar Panels for 10 KW power capacity is proposed. INR 5,00,000					This is taken as remediation cost.
12	**Transportation of Trucks**							
	Construction Phase	Tarpaulin covers for trucks	**50,000**		--	--	--	Proof is not available. Thus 50,000 are used in remediation cost.
	Operation	--			--	--	--	
13	**Disaster Management Plan**							
	Construction Phase	Earthquake resistant structure	No Violation	No Violation	--	--	--	Already included in cost of project

		Fire fighting system	Machines were equipped with their fire extinguishing equipment. Only base earth excavation work is done for 70 days, enclosed as per (Annexure-XVIII) **NO VIOLATION** Fire Fighting Organizing and Arrangement: External fire hydrant system,	No Violation		INR 18,94,328	INR 1,66,000	Fire NOC is obtained which is attached as **Annexure XII.**

			hose pipes, pumps with control panel, overhead tanks, First aid, fire extinguishers, sand buckets, Manual and automatic fire alarms, main security room, etc.					
	Operation Phase	Quarterly training @ 2,000/training for 5 years		30,000	Quarterly training@ 2,000/training		6,000	Cost is taken under remediation
	Total Cost		**18,68,275**			**2,83,72,454**	**1,92,4,434**	
		Remediation Cost	**18,68,275**		**Cost of EMP**	**3,02,96,888**		
		Remaining Remediation	**18,68,275**		**Cost of EMP**	**3,02,96,888**		

		Cost				

Expenditure of Proposed Remediation Cost:

Activity	Remark	Total (INR)	First Year (INR)	Second Year (INR)	Third Year (INR)
1. Environmental Management					
Plantation of trees along the roadside area inside or outside the project	Plantation of trees near project site or any other nearby projects.	10,00,000		-	10,00,000
2. Community resource development					
Help of municipal authority for maintenance of already developed park in surrounding area.	Development of park.	3,53,798		-	3,53,798
3. Natural resources augmentation					
Solar street light /led in nearby road side	30 @ Rs 25,000/ pieces.	5,14,477	2,00,000	2,00,000	1,14,477
Total remediation cost (1+2+3)		**18,68,275**	**2,00,000**	**2,00,000**	**14,68,275**

Further, PP has proposed Rs.18,68,275 as Remediation Cost and Rs. 3,02,96,888 as EMP) for this project.

As per above calculations, PP M/s Nakoda Construction Company, 3-4, Diamond Colony, Indore, M.Phas proposed to submit bank guarantee of INR 18,68,275/- towards Remediation Plan and Natural & Community Resource Augmentation Plan.

Committee after considering the reply recommends that PP may be asked to deposit the bank guarantee (BG) with Four years validity of Rs.18,68,275/- (equivalent to amount proposed in remediation and resource augmentation plan) with the MP Pollution control Board after approval of the SEIAA as per the procedure laid down in the MoEF& CC Notification dated 08/03/2018.

The EIA/EMP and other submissions made by the PP earlier were found to be satisfactory and acceptable, hence committee decided to recommend the case for grant of Environment Clearance for Proposed "Golden Palm" (Total Plot Area – 30,687.30 sqm, Total Proposed Built up Area –

50,765.88 sqm) at Khasra No. – 200/1, 201, 203, 204, 206, 207, 214/1, 214/2, Village - Niranjanpur, Tehsil - Indore, Dist. Indore, MP For - Building Constuction Project Category: 8(a), subject to the following special conditions and submission of bank guarantee (BG) with 04 years validity of Rs. 18,68,275/- (equivalent to amount proposed in remediation and resource augmentation plan) with the MP Pollution control Board , with following additional conditions:

Statutory Compliance

i. 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.
ii. The approval of the Competent Authority shall be obtained for structural safety of building due to earthquakes, adequacy of firefighting equipment etc as per National Building code including protection measures from lightening etc.
iii. 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.
iv. The project proponent shall obtain the necessary permission for drawl of ground water/surface water required for the project from the competent authority.
v. 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.
vi. 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.
vii. The provisions for the solid Waste (Management) Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
viii. The project proponent shall follow the ECBC/ECBC-R prescribed by Bureau of Energy Efficiency, Ministry of Power Strictly.

II. Air Quality Monitoring and preservation

i. Notification GSR 94(E) dated: 25/1/2018 MoEF& CC regarding Mandatory implementation of Dust Mitigation Measures for Construction and Demolition Activities for project requiring Environmental Clearance shall be complied with.
ii. A management plan shall be drawn up and implemented to contain the current exceedance in ambient air quality at the site.
iii. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released covering upwind and downwind directions during the construction period.

iv. Diesel power generating sets (13 X 30 KVA) 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.

v. 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 wills all around the site plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, Murram and other construction materials prone to causing dust polluting at the site as well as taking out debris from the site.

vi. Sand, Murram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution.

vii. Wet jet shall be provided for grinding and stone cutting.

viii. Unpaved surface and loose soil shall be adequately sprinkled with water to suppress dust.

ix. All construction and demolition debris shall be stored at the site (are 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 Rules, 2016.

x. 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.

xi. The gaseous emission from DG set (13 X 30 KVA) 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.

xii. For indoor air quality the ventilation provisions as per National Building Code of India.

III. Water quality monitoring and preservation

i. 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) are allowed for maintaining the drainage pattern and to harvest rain water.

ii. Buildings shall be designed to follow the natural topography as much as possible Minimum cutting and filling should be done.

iii. The total water requirement during operation phase is 600 KLD out of which 385 KLD is fresh water requirement and 432 KLD will be the treated water generated. Out of which 200

KLD treated water will be used for flushing and, while 50 KLD water will be used for horticulture.

iv. The quantity of fresh water usage, water recycling and rainwater harvesting shall be to monitor 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.

v. 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 separately for ground water and surface water sources, ensuring that there is no impact on other users.

vi. At least 20% of the open spaces as required by the local building bye-laws shall be previous. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as previous surface.

vii. Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc and other for supply of recycled water flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.

viii. 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.

ix. 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.

x. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.

xi. The local bye-law construction on rain water harvesting should be followed. If local by-law provision is not available, adequate provisions for storage and recharge should be followed as per the Ministry of Urban Development Model Building bylaws, 2016. Rain water harvesting recharge pits/storage tanks shall be provided for ground water recharging as per the CGWB norms.

xii. A rain water harvesting plan needs to be designed where the recharge bores of minimum one recharge bore per 5,000 square meter of built up area and storage capacity of minimum one day of total fires 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.

xiii. For rainwater harvesting, 06 recharge pits will be constructed for harvesting rain water. The total recharge capacity of these pits about 466.63 m^3/hr . Mesh will be provided at the roof so that leaves or any other solid waste/debris will be prevented from entering the pit.

xiv. All recharge should be limited to shallow aquifer.

xv. No ground water shall be used during construction phase of the project.

xvi. 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.

xvii. The quality 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 recorded shall be submitted to the Regional Office, MoEF& CC along with six monthly Monitoring report.

xviii. Sewage shall be treated in the STP based on MBBR based technology (Capacity - 550 KLD), treated effluent from STP shall be recycled/re-used for flushing. AC makes up water and gardening. As proposed, no treated water shall be disposed in to municipal drain.

xix. The waste water generated from the project shall be treated in STP of 550 KLD capacity (based on MBBR based technology) and then reused for various purposes. No water body or drainage channels are getting affected in the study area because of this project.

xx. No sewage or untreated effluent water would be discharged through storm water drains.

xxi. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problems from STP.

xxii. Sludge from the onsite sewage treatment including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Control Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.

IV. **Noise monitoring and prevention**

i. 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 monitoring 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.

ii. 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.

iii. 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.

V. Energy Conservation measures.

i. Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured, Building in the State which have notified their own ECBC, shall comply with the State ECBC.

ii. Outdoor and common area lighting shall be LED.

iii. 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.

iv. 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.

VI. **Waste Management**

i. Total waste 2240 Kg/day, this consist all types of wastes (as Organic waste 1344 Kg/day and non- organic waste 672 Kg/day), Inert waste 224 Kg/day, E- waste 1800 Kg/Annum , and these all type of waste shall be treated/ disposed off as per provision made in the MSW Rules 2016.

ii. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the MSW generated from project shall be obtained.

iii. Disposal of muck during construction phase shall not create any adverse effect on the neighboring 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.

iv. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste 1.55 ton/day) shall be segregated into wet garbage and inert materials.

v. All non-biodegradable waste shall be handed over the authorized recyclers for which a written lie up must be done with the authorized recyclers.

vi. 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.

vii. Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction materials quantity. These include fly ash brick, hollow bricks, AACs, Fly Ash Lime Gypsum block, compressed earth blocks and other environmental friendly materials.

viii. Fly ash should be used as building material in the construction as per the provisions 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.

ix. Any wastes from construction and demolition activities related thereto small be managed so as to strictly conform to the construction and Demolition Rules, 2016.

x. 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.

Vii. Green Cover

i. Total 300 trees shall be planted in the area of 3765 m^2 (10.06 % of total plot area)which is developed as greenbelt development.

ii. Not tree can be felled/transplant unless exigencies demand. Where absolute 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).

iii. 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 included 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.

iv. 6896sq meters of area shall be shall be provided for green belt development as per the details provided in the project document.

v. Topsoil should be stripped to depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stack plied appropriately in designated areas and reapplied during plantation of the proposed vegetations on site.

vi. 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.

VIII Transport

i. A comprehensive mobility plan, as per MoUD best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public and private network. 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

ii. 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.

iii. Total proposed Parking's arrangement for 656 ECS (in which nil ECS for Basement parking , 656 for ECS for Silt parking and nil for open parking).

iv. A detailed traffic management and traffic decongesting plan shall be drawn up to ensure that the current level of service of the road within a 05 Kms radius of the project as maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of the development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management and the PWD/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.

IX. Human health issues

i. 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.
ii. For indoor air quality the ventilation provisions as per National Building Code of India.
iii. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implementation.
iv. 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.
v. Occupational health surveillance of the workers shall be done on a regular basis.
vi. A First Aid Room shall be provided in the project both during construction and operations of the project.

X. **Corporation Environment Responsibility**

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated: 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
ii. 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 balance 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 MoEF&CC as a part of six monthly reports.
iii. A separate Environmental Cell both at the project and company head quarter with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

iv. 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. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

v. PP Shri Ahhay Jain, Partner, M/s Nakoda Construction Company -4, Diamond Colony, Dist. Indore, MP – 452001 has proposed Rs. 3,021,65,163.00 (Rs.18,68,275 as Remediation Cost and Rs. 2,83,72,454/- as capital cost and Rs. 1,92,4,434/- as recurring cost) as EMP for this project .

vi. The PP Shri Ahhay Jain, Partner, M/s Nakoda Construction Company -4, Diamond Colony, Dist. Indore, MP – 452001 has proposed to submit bank guarantee of INR 18,68,275.00 towards Remediation Plan and Natural & Community Resource Augmentation Plan.

vii. For this project PP has proposed Rs 142.0 Lakhs as Corporate Environment Responsibility (CER) for remaining project component.

XII. Miscellaneous

i. The project authorities must strictly adhere to the stipulation made by the MP Pollution Control Board and the State Government.

ii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the State Expert Appraisal Committee (SEAC)

iii. No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

iv. 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.

v. 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.

9. Case No. – 5789/2018 M/s Satyamitra Infrastructure Pvt. Ltd, 247, Prem Trade Centre, Maharani Road, Indore, MP Prior Environment Clearance for Construction of Proposed "Satyamitra Rajlaxmi Nature" Multi Dwelling Units (Total Plot Area = 24021 sqm., Total Proposed Built-up Area = 28433 sqm) at Khasra No. 537 Rangwasa village, Tehsil - Indore & Dist. Indore, MP.

Earlier this case was scheduled for presentation and discussion in 333rd SEAC meeting dated 29/11/2018 wherein ToR was recommended.

PP has submitted the EIA report vide letter dated 14/07/20 which was forwarded through SEIAA vide letter no. 1871 dated 25/07/2020, which was placed before the committee.

The case was scheduled for the presentation but neither the Project Proponent (PP) nor his representative was present to explain the query which might be raised or to make any commitment which may be desired by the committee during the deliberation. Committee decided to call the PP in subsequent meetings.

10. Case No. – 5790/2018 M/s. MSD Developers, Plot No. 8, PU-4 Commercial Sch. No. 54, AB Road, Indore, MP – 452001 Prior Environment Clearance for Construction of Proposed "SHIVOM" Commercial and Residential Building (Total Plot Area = 9290.30 sqm., Total Proposed Built-up Area = 25885 sqm) at Plot No. 578, Village - MG Road, Tehsil - Indore & Dist. Indore, MP.

Earlier this case was scheduled for presentation and discussion in 333rd SEAC meeting dated 29/11/2018 wherein ToR was recommended.

PP has submitted the EIA report vide letter dated 04/08/20 which was forwarded through SEIAA vide letter no. 2011 dated 07/08/2020, which was placed before the committee.

The EIA was presented by the PP and their consultant with site specific details as are given below:

The chronology of the project:

1. Master Plan approved by Directorate of Town and Country Planning, Madhya Pradesh on dated 28.06.2014.
2. Construction was started on Feb 2015.

Type of dwelling Units	Total Unit Proposed	Possession given	Unit Incomplete	Unit Completed
Flats units	120	120	00	120
Shops/Office	80	80	00	80

Proposal submitted to SEIAA	EDS by SEIAA	Submission of EDS	Accepted by SEIAA	Hardcopy submission	SEAC Agenda
03/08/2017	16/04/2018 17/05/2019	15/05/2019 03/01/2020	30/01/2020	03/02/2020	433rd SEAC meeting dated 19/05/2020

PP further stated that 100 % construction have been done and possession given to 120 Flats units and 80 Shops/Office. During EIA presentation it was observed by the committee that PP has proposed Rs. 17,22,950.00 as cost of remediation and natural community resource augmentation plan. Following is the remediation plan and natural community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation:

PP presented the following Remedial Plan/Augmentation Plan as :

S. No.	Environmental Factors /Attributes	Remedial Plan/Augmentation Plan	Remedial Cost (in INR)		Environmental Management Plan	EMP Cost (in INR)/year		Remark
			Capital Cost	Recurring Cost		Capital Cost	Recurring Cost	
1	Land use as per approved Master plan by T&CP, Bhopal							

	Construction Phase	No Violation			--	--	--	Land use of the project site was Residential as per Indore Master Plan 2005 attached **Annexure - II**
	Operation Phase	No Violation			--	--	--	
2	**Environmental Sensitive places, land acquisition status, resettlement & rehabilitation (R&R)**							
	Construction Phase	No Violation			--	--	--	Project involves no R&R issues. The Project is on joint Venture. Joint Venture Papers are attached. **Annexure III**
	Operation Phase	No Violation			--	--	--	
3	**Baseline Environment Monitoring**							
	Construction Phase	For monitoring of air, water, soil & noise every six month for period of two years 1. Water: 4 GW sample @ 5000/sample 2. Air: 4 Sample @ 5000/sample, DG 2 sample @ 7500/sample 3. Noise: 2 sample @ 1000/sample,	1,68,000		For monitoring of air, water, soil & noise every six month 1. Water: 4 GW sample @ 5000/sample 2. Air: 4	NA		No environment monitoring was done at site on initial starting of the project since the project began in 2013. Hence **2013-14, 2014-15, 2015-16,**

		DG set 2 sample @ 1000/sample 4. Soil: 2 sample @ 4000/sample			Sample @ 5000/sample, 7500/sample 3. Noise: 2 sample @ 1000/sample, DG set 2 sample @ 1000/sample 4. Soil: 2 sample @ 4000/sample			**2016-17, 2017-18& 2019-2020.**This remediation plan is of **5 years**. The Remediation plan of Rs. 3,78,000 will be spent inside the project premises or outside the premises of the project in Plantation /Env Monitoring
	Operation Phase	For monitoring of air, water, soil & noise every six month for period of five years 1. Water: 2 GW sample @ 5000/sample 2. Air: 2 Sample @ 5000/sample, 3. Noise: 2 sample @ 1000/sample, DG set 1 sample @	NA	NA	For monitoring of air, water, soil & noise every six month 1. Water: 2 GW sample @ 5000/sample 2. Air: 2 Sample @ 5000/sa	NA	**1,50,000**	

		1000/sample 4. Soil: 2 sample @ 4000/sample			mple, DG 1 sample @ 5000/sample 3. Noise: 2 sample @ 1000/sample, DG set 1 sample @ 1000/sample 4. Soil: 2 sample @ 4000/sample			
4	**Air Environment**							
	Construction Phase	Water sprinkling	Water sprinkling is done as per terms & conditions of the work order agreement (3 water tractors/day) enclosed with bill as (Annexure-VI) &Barricading is on site done and exist, enclosed photograph as Annexure-VII)		Construction period= 4 years, working day= 800 day, Per day water requirement= 12000 KLD @ 320/ tanker	7,68,000	--	**All bills submitted in hard copies to SEAC**
		Container for Storage of raw material	Storage hall/Service Yard (Size-35mx25m) was provided during construction phase for materials stacking	No Violation	--	INR 90,000	INR 7000	**All bills submitted in hard copies to SEAC**
		Green Nets for covering building for 9290.30Sqm	**46450**		--	--	--	Proof is not available, therefore

		area @ Rs 5/Sqm						cost is taken in Remediation Cost
		Barricading of construction area	Site was fully barricaded (Annexure-VIII). All modern and new machinery was used on site. **NO VIOLATION**	Site boundary constructed	Construction is completed now. Project is in operational phase.	12,48,000	--	Bills submitted in hard copies
		Helmets, jackets, hand gloves & boots has been provided to the workers, enclosed Bill receipt as (Annexure-IX)			--	INR 22,15,395	--	Photographs & ledger accounts are attached for the reference
		Vehicle Inspection @ 15,000/year for 4 years	60,000		--	--	--	Proof is not available, therefore cost is taken in Remediation Cost
	Operation Phase	DG sets 250 kVA. With prevention of combustion fumes. Acoustic encloser and stack height has been provided as per CPCB Norms				INR 12,50,000	INR Annual maintenance @22865	Maintenance of 1 no. of DG set/year through AMC @ 22,865/year
5	**Waste Environment**							

	Construction Phase	150 Dustbin @ Rs 200/each	30,000		--	2,17,000	--	Proof is not available, therefore cost is taken in Remediation Cost
		Safety tapes for barricading the waste	10,000		--	--	--	
		Agency fee for collection & disposal Solid waste for 2 years @ Rs. 1000/month	24,000		--	--	--	
	Operation Phase	15 Dustbin @ Rs 300/each	4,500		Agency fee for collection & disposal Solid waste @ Rs. 100/month	1,50,000		MUNICIPAL CORPORATION NOC ATTACHED FEES IS INCLUSIVE OF PROPERTY TAX also NOC Attached of MSW Disposing **ANNEXURE - V**
		Agency fee for collection & disposal Municipal Solid waste		50,000		--	12,000	
		STP sludge disposal	No Violation	No Violation	STP sludge disposal	Will be used as manure	--	Sludge is being used for landscaping purpose.
6	**Water Environment**							
	Construction Phase	Ground water abstraction	No ground bore well is done. **NO VIOLATION** (Under Taking annexure V)		NA	Not applicable, till date no bore well for ground	NA	For operational phase builder has arranged water

						water tapping is proposed for construction.		from tankers on daily bases bills are attached for further reference. Photographs are attached herewith for your reference
		Construction of Toilets	Temporary shelter & toilets has been provided to workers enclosed pics as (Annexure-X)	No Violation	NA	8,56,246	NA	Bills submitted in hard copies.
		STP & Duel Plumbing installation of 550 KLD	Water Demand is being fulfilled by Municipal Water Supply Sewage Water is treating in 100 KLD STP and Recycled and reuse for Greenbelt, Flushing purposes.dual plumbing is done and operational.	No Violation	NA	INR 15,00,000(STP)+ 28,03,243 (Dual plumbing)= 43,03,243		**We have already obtained municipal water supply permission which is attached for reference.**
		Construction of 8 RWH	8.0 nos of rain water harvesting has been provided.**NO Violation**	No Violation	NA	INR 44,72,000		8 RWH pits are constructed & CGWB compliance to be done.
	Operation Phase	Abstraction of Ground water	No Violation	No Violation	NA	NA	NA	Water is being supplied through Municipal Supply. NOC is attached

								as **Annexure VII**
		STP & Duel Plumbing AMC &Maintainance of 550 KLD	No Violation	No Violation	STP operation and maintenance @ Rs 45,000/ month	NA	**INR 5,40,000 (STP AMC @ 45000rs/month)+ 1,68,389 (Dual plumbing) = 7,08,398.**	STP is FULL functional . Photos of STP Attached **Annexure VIII**
		Maintenance and cleaning of RWH system	No Violation	No Violation	Maintenance and cleaning of RWH system @ Rs 32,000/ twice in a year	NA	INR 32,000 (Recurring cost for the maintenance of RWH pits.)	Bills are Submitted .
		Cleaning and maintenance of water network @ Rs 50,000/twice in a year	No Violation	No Violation	Cleaning and maintenance of water network @ Rs 50,000/ twice in a year	NA	**2,00,000**	
7	**Occupational Health and Safety of construction worker**							
	Construction Phase	First aid kit at site	**50,000**		--	--	--	Proof is not available, therefore cost is taken in Remediation Cost
		PPE for labor	**50,000**		--	--	--	
		Health checkup for labor twice in a year for 50 LABOR @ 1000/ labor	**50,000**		--	--	--	
	Operation	--			--	--	--	

	Phase							
	Ecology Environment							
8	**Construction Phase**	Cutting of Trees	No Tree Falling done **No Violation**	No Violation	--	--	--	No tree was felled. No tree was present on the land. Attached affidavit **Annexure - I**
		Development of Green Area	Total 300 trees planted during construction. Species wise and location wise inventory enclosed as (Annexure-XIII)			INR 7,62,313	INR 1,90,546	Green area will be developed in the project site. Plantation photos attached **Annexure - IX**
	Operation Phase	Maintenance of green area for 1 years after plantation	No violation	No Violation	Maintenance of green area for @ 2,40,000/annum	--	**2,40,000**	Gardner is allocated for maintenance of landscape.
	Soil Environment							
9	**Construction Phase**	Soil characteristics are as per baseline environmental data. Total land area 9290.30 sqm, ground coverage @ 30%= 2752.80 Sq.M, excavated material= 11521	No violation as entire top soil was used in garden and back filling of plinth area.		NA	INR 5,63,849.00		Ledger accounts are submitted in hard copies.

		cum, total quantity of topsoil have been used for the development of garden area which is 975.00 Sqm i.e. 10.6 % of total plot area.						
	Operation Phase	--			--	--	--	
10	**Noise Environment**							
		Ear plugs for labour@ Rs 100/pcs (1000 pcs)	1,00,000			--	--	Proof is not available, therefore cost is taken in Remediation Cost
	Operation Phase	Replacement of Vibration pads of DG set (once in five years)	1,50,000		Replacement of Vibration pads of DG set			Five years not completed yet. Hence cost is not taken in remediation cost
11	**Energy Conservation**							
	Construction Phase	--			--	--	--	
	Operation Phase	Installation of LED	No Violation		--	INR 9,56,981	INR 1,89,634 (This amount has been incurred for the maintenance point of view.)	Proof is available photographs attached **ANNEXURE XI**
		Solar Panel	Solar Panels for 18 KW power capacity is proposed.					This is taken as

			INR 9,00,000					remediation cost.
12	**Transportation of Trucks**							
	Construction Phase	Tarpaulin covers for trucks	**50,000**		--	--	--	Proof is not available. Thus 50,000 are used in remediation cost.
	Operation	--			--	--	--	
13	**Disaster Management Plan**							
	Construction Phase	Earthquake resistant structure	No Violation	No Violation	--	--	--	Already included in cost of project
		Fire fighting system	Machines were equipped with their fire extinguishing equipment. Only base earth excavation work is done for 70 days, enclosed as per (Anne	No Violation		INR 25,94,328	I INR 1,98,000	Fire NOC is obtained which is attached as **Annexure XII.**

			xure-XVIII) **NO VIOLATION** Fire Fighting Organizing and Arrangement: External fire hydrant system, hose pipes, pumps with control panel, overhead tanks, First aid, fire extinguishers, sand buckets, Manual and automatic fire alarms, main security					

			room, etc.					
	Operation Phase	Quarterly training@ 2,000/training for 5 years		30,000	Quarterly training@ 2,000/training		6,000	Cost is taken under remediation
	Total Cost		**17,22,950**			**2,04,47,355**	**1,92,443**	
		Remediation Cost	**17,22,950**		**Cost of EMP**	**2,06,39,798**		
		Remaining Remediation Cost	**17,22,950**		**Cost of EMP**	**2,06,39,798**		

Expenditure of Proposed Remediation Cost:

Activity	Remark	Total (INR)	First Year (INR)	Second Year (INR)	Third Year (INR)
1. Environmental Management					
Plantation of trees along the roadside area inside or outside the project	Plantation of trees near project site or any other nearby projects	10,00,000		-	10,00,000
2. Community resource development					
Help of municipal authority for maintenance of already developed park in surrounding area.	Development of park	2,96,000		-	2,96,000
3. Natural resources augmentation					
Solar street light /led in nearby road side	17 @ Rs 25,000/ pieces	4,26,950	2,00,000	2,00,000	26,950
Total remediation cost (1+2+3)		**17,22,950**	**2,00,000**	**2,00,000**	**13,22,950**

Further, PP has proposed Rs. 2,23,62,748.00 (Rs. 17,22,950.00 as Remediation Cost and Rs. 2,06,39,798.00 as EMP) for this project.

As per above calculations, PP- M/s. MSD Developers, Plot No. 8, PU-4 Commercial Sch. No. 54, AB Road, Indore, MP – 452001 has proposed to submit bank guarantee of INR 17,22,950.00 towards Remediation Plan and Natural & Community Resource Augmentation Plan.

Committee after considering the reply recommends that PP may be asked to deposit the bank guarantee (BG) with Four years validity of Rs. **17,22,950.00** (equivalent to amount proposed in remediation and resource augmentation plan) with the MP Pollution control Board after approval of the SEIAA as per the procedure laid down in the MoEF& CC Notification dated 08/03/2018.

The EIA/EMP and other submissions made by the PP earlier were found to be satisfactory and acceptable, hence committee decided to recommend the case for grant of Environment Clearance for Construction of Proposed "SHIVOM" Commercial and Residential Building (Total Plot Area = 9290.30 sqm., Total Proposed Built-up Area = 25885 sqm) at Plot No. 578, Village - MG Road, Tehsil - Indore & Dist. Indore, MP For - Building Constuction Project Category: 8(a), subject to the following special conditions and submission of bank guarantee (BG) with 04 years validity of Rs. **17,22,950.00** (equivalent to amount proposed in remediation and resource augmentation plan) with the MP Pollution control Board , with following additional conditions:

Statutory Compliance

i. 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.
ii. The approval of the Competent Authority shall be obtained for structural safety of building due to earthquakes, adequacy of firefighting equipment etc as per National Building code including protection measures from lightening etc.
iii. 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.
iv. The project proponent shall obtain the necessary permission for drawl of ground water/surface water required for the project from the competent authority.
v. 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.
vi. 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.
vii. The provisions for the solid Waste (Management) Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.

viii. The project proponent shall follow the ECBC/ECBC-R prescribed by Bureau of Energy Efficiency, Ministry of Power Strictly.

II. Air Quality Monitoring and preservation

i. Notification GSR 94(E) dated: 25/1/2018 MoEF& CC regarding Mandatory implementation of Dust Mitigation Measures for Construction and Demolition Activities for project requiring Environmental Clearance shall be complied with.
ii. A management plan shall be drawn up and implemented to contain the current exceedance in ambient air quality at the site.
iii. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released covering upwind and downwind directions during the construction period.
iv. Diesel power generating sets (15 kVA X 02) 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.
v. 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 wills all around the site plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, Murram and other construction materials prone to causing dust polluting at the site as well as taking out debris from the site.
vi. Sand, Murram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution.
vii. Wet jet shall be provided for grinding and stone cutting.
viii. Unpaved surface and loose soil shall be adequately sprinkled with water to suppress dust.
ix. All construction and demolition debris shall be stored at the site (are 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 Rules, 2016.
x. 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.
xi. The gaseous emission from DG set (15 kVA X 02) 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.

xii. For indoor air quality the ventilation provisions as per National Building Code of India.

III. Water quality monitoring and preservation

i. 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) are allowed for maintaining the drainage pattern and to harvest rain water.

ii. Buildings shall be designed to follow the natural topography as much as possible Minimum cutting and filling should be done.

iii. The total water requirement during operation phase is 96 KLD out of which 43 KLD is fresh water requirement and 76 KLD will be the recycled water generated. Out of which 32 KLD treated water will be used for flushing and, while 17 KLD water will be used for horticulture.

iv. The quantity of fresh water usage, water recycling and rainwater harvesting shall be to monitor 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.

v. 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 separately for ground water and surface water sources, ensuring that there is no impact on other users.

vi. At least 20% of the open spaces as required by the local building bye-laws shall be previous. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as previous surface.

vii. Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc and other for supply of recycled water flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.

viii. 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.

ix. 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.

x. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.

xi. The local bye-law construction on rain water harvesting should be followed. If local by-law provision is not available, adequate provisions for storage and recharge should be followed as per the Ministry of Urban Development Model Building bylaws, 2016. Rain water harvesting

recharge pits/storage tanks shall be provided for ground water recharging as per the CGWB norms.

xii. A rain water harvesting plan needs to be designed where the recharge bores of minimum one recharge bore per 5,000 square meter of built up area and storage capacity of minimum one day of total fires 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.

xiii. For rainwater harvesting, 08 recharge pits will be constructed for harvesting rain water. The total recharge capacity of these pits about 61.94 m^3/hr . Mesh will be provided at the roof so that leaves or any other solid waste/debris will be prevented from entering the pit.

xiv. All recharge should be limited to shallow aquifer.

xv. No ground water shall be used during construction phase of the project.

xvi. 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.

xvii. The quality 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 recorded shall be submitted to the Regional Office, MoEF& CC along with six monthly Monitoring report.

xviii. Sewage shall be treated in the STP based on MBBR based technology (Capacity - 100 KLD), treated effluent from STP shall be recycled/re-used for flushing. AC makes up water and gardening. As proposed, no treated water shall be disposed in to municipal drain.

xix. The waste water generated from the project shall be treated in STP of 100 KLD capacity (based on MBBR based technology) and then reused for various purposes. No water body or drainage channels are getting affected in the study area because of this project.

xx. No sewage or untreated effluent water would be discharged through storm water drains.

xxi. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problems from STP.

xxii. Sludge from the onsite sewage treatment including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Control Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.

IV. **Noise monitoring and prevention**

i. 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 monitoring 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.

ii. 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.
iii. 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.

V. Energy Conservation measures.

i. Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured, Building in the State which have notified their own ECBC, shall comply with the State ECBC.
ii. Outdoor and common area lighting shall be LED.
iii. 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.
iv. 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.

VI. **Waste Management**

i. Total waste 381.5 Kg/day, this consist all types of wastes (as Organic waste 228.9 Kg/day and non- organic waste 114.42 Kg/day), Inert waste 38.15 Kg/day, E- waste 1800 Kg/Annum , and these all type of waste shall be treated/ disposed off as per provision made in the MSW Rules 2016.
ii. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the MSW generated from project shall be obtained.
iii. Disposal of muck during construction phase shall not create any adverse effect on the neighboring 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.
iv. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste 1.55 ton/day) shall be segregated into wet garbage and inert materials.
v. All non-biodegradable waste shall be handed over the authorized recyclers for which a written lie up must be done with the authorized recyclers.

vi. 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.

vii. Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction materials quantity. These include fly ash brick, hollow bricks, AACs, Fly Ash Lime Gypsum block, compressed earth blocks and other environmental friendly materials.

viii. Fly ash should be used as building material in the construction as per the provisions 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.

ix. Any wastes from construction and demolition activities related thereto small be managed so as to strictly conform to the construction and Demolition Rules, 2016.

x. 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.

Vii. **Green Cover**

i. Total 100 trees shall be planted in the area of 975.0 m^2 (10.06 % of total plot area)which is developed as greenbelt development.

ii. Not tree can be felled/transplant unless exigencies demand. Where absolute 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).

iii. 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 included 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.

iv. 6896sq meters of area shall be shall be provided for green belt development as per the details provided in the project document.

v. Topsoil should be stripped to depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stack plied appropriately in designated areas and reapplied during plantation of the proposed vegetations on site.

vi. 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.

VIII Transport

i. A comprehensive mobility plan, as per MoUD best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public and private network. Road should be designed with due consideration for environment and safety of users. The road system can be designed with these basic criteria.

   e. Hierarchy of roads with proper segregation of vehicular and pedestrian traffic
   f. Traffic calming measures.
   g. Proper design of entry and exit points
   h. Parking norms as per local regulation

ii. 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.

iii. Total proposed Parking's arrangement for 343 ECS (in which 114 ECS for Basement parking , 133 for ECS for Silt parking and 96 for open parking).

iv. A detailed traffic management and traffic decongesting plan shall be drawn up to ensure that the current level of service of the road within a 05 Kms radius of the project as maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of the development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management and the PWD/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.

IX. Human health issues

i. 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.

ii. For indoor air quality the ventilation provisions as per National Building Code of India.

iii. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implementation.

iv. 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.

v. Occupational health surveillance of the workers shall be done on a regular basis.

vi. A First Aid Room shall be provided in the project both during construction and operations of the project.

X. Corporation Environment Responsibility

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated: 1st May 2018, as applicable, regarding Corporate Environment Responsibility.

ii. 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 balance 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 MoEF&CC as a part of six monthly reports.

iii. A separate Environmental Cell both at the project and company head quarter with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

iv. 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. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

v. PP M/s. MSD Developers, Plot No. 8, PU-4 Commercial Sch. No. 54, AB Road, Indore, MP – 452001 has proposed Rs. 2,23,62,748.00 (Rs. 17,22,950.00 as Remediation Cost and Rs. **2,06,39,798** (Rs. **2,04,47,355**/- as capital cost and Rs. **1,92,443**/- as recurring cost) as EMP for this project .

vi. The PP Shri Ahhay Jain, Partner, /s. MSD Developers, Plot No. 8, PU-4 Commercial Sch. No. 54, AB Road, Indore, MP – 452001 has proposed to submit bank guarantee of INR 17,22,950.00 towards Remediation Plan and Natural & Community Resource Augmentation Plan.

vii. For this project PP has proposed Rs 216.00 Lakhs as Corporate Environment Responsibility (CER) for remaining project component.

XI. Miscellaneous

i. The project authorities must strictly adhere to the stipulation made by the MP Pollution Control Board and the State Government.

ii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the State Expert Appraisal Committee (SEAC)

iii. No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

iv. 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.

v. 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. Case No 7340/2020 M/s Tirupati Buildcon Pvt. Ltd, Shri Padam Kumar Singhania, Director, Vikrampur Road, Opp. Railway Station, Post - Burhar, Dist. Shahdol, MP – 484110 Prior Environment Clearance for Stone Quarry in an area of 1.960 ha. (19000 cum per annum) (Khasra No. 371/1 P) at Village- Banka, Tehsil- Chandia, District- Umaria (MP)

This is case of Stone Quarry. The application was forwarded by SEIAA to SEAC for appraisal. The proposed site at (Khasra No. 371/1 P) at Village- Banka, Tehsil- Chandia, District- Umaria (MP) 1.960 Ha. The project requires prior EC before commencement of any activity at site.

PP has submitted a copy of approved Mining Plan, DSR report, information in the lease's within 500 meters radius around the site and other requisite information in the prescribed format duly verified in the Collector Office letter no. 2463 dated 07/12/2015 has reported that there are no more mines operating or proposed within 500 meters around the said mine.

The case was scheduled in 448nd meeting dated 23/07/2020 for the presentation but neither the Project Proponent (PP) nor his representative was present to explain the query which might be raised or to make any commitment which may be desired by the committee during the deliberation. Committee decided to call the PP in subsequent meetings.

During presentation it was observed that as per Google image based on coordinates provided by PP that the lease is already excavated in the south west corner of the lease PP stated that the earlier for this lease the EC was granted by the DEIAA for 2.0 ha., for the period of 10 years

but during the renewal process, District Authority has deducted the lease of 0.04 ha., from previous sanctioned lease of 2.0 ha., and therefore the renewed lease was 1.96 ha., hence, PP has come for fresh EC. Moreover as per Field Director letter no. 4342 dated 23.10.2015 it is mentioned that Bandhavgarh Tiger Reserve from the lease area is 2.950 KM (from the Bandhavgarh National Park). In this context notification PP submitted that as per S.O. 4027 (E) dated 14.12.2016 of the Bandhavgarh National Park and Panpatha Wildlife Sanctuary (ESZ) the extent of the ESZ is only up to 2.0 kilometers and their lease is 2.950 Kms. PP further submitted that their mine is located in village Banka which is not covered under the list of villages falling in the notified ESZ.

Within 500 meters following sensitive features were observed of the lease area.

Sensitive Features	**Approximate aerial distance from the lease area in meters**	**Direction**	**Remarks**
Pucca Road	>60	South -West	Setback of 25 meters and Controlled blasting with arrangements of sand bags and three rows of Plantation towards road side.
Kachha Road	07	South	Setback of 03 meters and Controlled blasting with arrangements of sand bags and three rows of Plantation towards road side.

After presentation the committee asked to submit following details:

- Requirement of fresh EC.
- Distance from Bandhavgarh National Park and Panpatha Wildlife Sanctuary (ESZ).
- Copy of receipt of submitting six monthly compliance report to competent authority.

PP has submitted the response of above quarries same date vide letter dated 13.08.2020, which was placed before the committee and the same found satisfactory. The EMP and other submissions made by the PP were found to be satisfactory and acceptable, hence committee decided to recommend the case for grant of prior EC subject to the following special conditions in addition to the standard conditions at annexure 'A':

1. Production shall be as per mine plan with quantity not exceeding for Stone 19,000 cum per annum.

2. A budgetary provision for Environmental management Plan of Rs. 8.75 Lakh as capital and Rs. 5.75 Lakh/year as recurring. Under CER Rs 2.0 Lakh/ year has proposed.

12. Case No 7353/2020 M/s City Enterprises, Prop. Smt. Shweta Goyanka, Village - Kotma, Tehsil - Kotma, Dist. Anuppur, MP – 484334 Prior Environment Clearance for Stone Quarry in an area of 1.011 ha. (20000 cum per annum) (Khasra No. 335/1) at Village- Pairichua, Tehsil- Kotma, District- Anuppur (MP)

This is case of Stone Quarry. The application was forwarded by SEIAA to SEAC for appraisal. The proposed site at (Khasra No. 335/1) at Village- Pairichua, Tehsil- Kotma, District- Anuppur (MP) 1.011 Ha. The project requires prior EC before commencement of any activity at site.

PP has submitted a copy of approved Mining Plan, DSR report, information in the lease's within 500 meters radius around the site and other requisite information in the prescribed format duly verified in the Collector Office letter no. 710 dated 21/5/2020 has reported that there are no more mines operating or proposed within 500 meters around the said mine.

The case was scheduled in 449nd meeting dated 24/07/2020 for the presentation but neither the Project Proponent (PP) nor his representative was present to explain the query which might be raised or to make any commitment which may be desired by the committee during the deliberation. Committee decided to call the PP in subsequent meetings.

The case was scheduled again for presentation but neither the Project Proponent (PP) nor his representative was present to explain the query which might be raised or to make any commitment which may be desired by the committee during the deliberation. PP was also absent in the 449nd meeting dated 24/07/2020. Committee decided to give last chance to PP for making presentation in the subsequent meetings of SEAC after which the case shall be returned to SEIAA assuming that PP is not interested to continue with the project

13. Case No 7367/2020 Shri Sunil Kumar Gupta S/o Shri Sharda Prasad Gupta, Village - Lalatola, Post - Beldongari, Tehsil - Pushprajgarh, Dist. Anuppur, MP - 484881 Prior Environment Clearance for Stone Quarry in an area of 1.91 ha. (30000 cum per annum) (Khasra No. 192) at Village- Saraipatera (Bhaisantola), Tehsil- Pushprajgarh, District- Anuppur (MP)

This is case of Stone Quarry. The application was forwarded by SEIAA to SEAC for appraisal. The proposed site at (Khasra No. 192) at Village- Saraipatera (Bhaisantola), Tehsil-

Pushprajgarh, District- Anuppur (MP) 1.91 Ha. The project requires prior EC before commencement of any activity at site.

PP has submitted a copy of approved Mining Plan, DSR report, information in the lease's within 500 meters radius around the site and other requisite information in the prescribed format duly verified in the Collector Office letter no. 709 dated 21/5/2020 has reported that there are no more mines operating or proposed within 500 meters around the said mine.

The case was scheduled in 449nd meeting dated 24/07/2020 for the presentation but neither the Project Proponent (PP) nor his representative was present to explain the query which might be raised or to make any commitment which may be desired by the committee during the deliberation. Committee decided to call the PP in subsequent meetings.

The case was scheduled again for presentation but neither the Project Proponent (PP) nor his representative was present to explain the query which might be raised or to make any commitment which may be desired by the committee during the deliberation. PP was also absent in the 449nd meeting dated 24/07/2020. Committee decided to give last chance to PP for making presentation in the subsequent meetings of SEAC after which the case shall be returned to SEIAA assuming that PP is not interested to continue with the project.

14. Case No 7364/2020 M/s Bamdev Global, Authorized Person, Shri Upendra Gupta, E-91, Shree Nath Vihar, Chilla Road, Dist. Banda, UP - 210001 Prior Environment Clearance for Sand Quarry in an area of 6.00 ha. (30,000 cum per annum) (Khasra No. 122, 318, 01, 52 Parts) at Village- Gavhana, Tehsil- Burhanpur, District- Burhanpur (MP).

This is case of Sand Quarry. The application was forwarded by SEIAA to SEAC for appraisal. The proposed site at (Khasra No. 122, 318, 01, 52 Parts) at Village- Gavhana, Tehsil- Burhanpur, District- Burhanpur (MP) 6.00 Ha. The project requires prior EC before commencement of any activity at site.

PP has submitted a copy of approved Mining Plan, DSR report, information in the lease's within 500 meters radius around the site and other requisite information in the prescribed format duly verified in the Collector Office letter no. 159 dated 03/2/2020 has reported that there are no more mines operating or proposed within 500 meters around the said mine.

The case was scheduled in 447th meeting dated 22/07/2020 for the presentation but neither the Project Proponent (PP) nor his representative was present to explain the query which might be

raised or to make any commitment which may be desired by the committee during the deliberation. Committee decided to call the PP in subsequent meetings.

The case was scheduled again for presentation but neither the Project Proponent (PP) nor his representative was present to explain the query which might be raised or to make any commitment which may be desired by the committee during the deliberation. PP was also absent in the 447th meeting dated 22/07/2020. Committee decided to give last chance to PP for making presentation in the subsequent meetings of SEAC after which the case shall be returned to SEIAA assuming that PP is not interested to continue with the project

15. Case No 7365/2020 M/s Bamdev Global, Authorized Person, Shri Upendra Gupta, E-91, Shree Nath Vihar, Chilla Road, Dist. Banda, UP - 210001 Prior Environment Clearance for Sand Quarry in an area of 7.00 ha. (35,000 cum per annum) (Khasra No. 01) at Village- Nachankheda, Tehsil- Burhanpur, District- Burhanpur (MP).

This is case of Sand Quarry. The application was forwarded by SEIAA to SEAC for appraisal. The proposed site at (Khasra No. 01) at Village- Nachankheda, Tehsil- Burhanpur, District- Burhanpur (MP) 7.00 Ha. The project requires prior EC before commencement of any activity at site.

PP has submitted a copy of approved Mining Plan, DSR report, information in the lease's within 500 meters radius around the site and other requisite information in the prescribed format duly verified in the Collector Office letter no. 159 dated 03/2/2020 has reported that there are no more mines operating or proposed within 500 meters around the said mine.

The case was scheduled in 447th meeting dated 22/07/2020 for the presentation but neither the Project Proponent (PP) nor his representative was present to explain the query which might be raised or to make any commitment which may be desired by the committee during the deliberation. Committee decided to call the PP in subsequent meetings.

The case was scheduled again for presentation but neither the Project Proponent (PP) nor his representative was present to explain the query which might be raised or to make any commitment which may be desired by the committee during the deliberation. PP was also absent in the 447th meeting dated 22/07/2020. Committee decided to give last chance to PP for making presentation in the subsequent meetings of SEAC after which the case shall be returned to SEIAA assuming that PP is not interested to continue with the project

16. Case No 7366/2020 M/s Bamdev Global, Authorized Person, Shri Upendra Gupta, E-91, Shree Nath Vihar, Chilla Road, Dist. Banda, UP - 210001, Prior Environment Clearance for Sand Quarry in an area of 5.00 ha. (25,000 cum per annum) (Khasra No. 51, 96) at Village- Rehata, Tehsil- Burhanpur, District- Burhanpur (MP).

This is case of Sand Quarry. The application was forwarded by SEIAA to SEAC for appraisal. The proposed site at (Khasra No. 51, 96) at Village- Rehata, Tehsil- Burhanpur, District- Burhanpur (MP) 5.00 Ha. The project requires prior EC before commencement of any activity at site.

PP has submitted a copy of approved Mining Plan, DSR report, information in the lease's within 500 meters radius around the site and other requisite information in the prescribed format duly verified in the Collector Office letter no. 159 dated 03/2/2020 has reported that there are no more mines operating or proposed within 500 meters around the said mine.

The case was scheduled in 447th meeting dated 22/07/2020 for the presentation but neither the Project Proponent (PP) nor his representative was present to explain the query which might be raised or to make any commitment which may be desired by the committee during the deliberation. Committee decided to call the PP in subsequent meetings.

The case was scheduled again for presentation but neither the Project Proponent (PP) nor his representative was present to explain the query which might be raised or to make any commitment which may be desired by the committee during the deliberation. PP was also absent in the 447th meeting dated 22/07/2020. Committee decided to give last chance to PP for making presentation in the subsequent meetings of SEAC after which the case shall be returned to SEIAA assuming that PP is not interested to continue with the project.

17. Case No 7384/2020 M/s Bamdev Global, authorized person Shri Upendra Gupta, E-91, Shree Nath Vihar, Chilla Road Banda (UP)-210001 Prior Environment Clearance for Sand Quarry in an area of 13.600 ha. (40000 cum per annum) (Khasra No. 439) at Village- Fatepur, Tehsil- Burhanpur, District- Burhanpur (MP)

This is case of Sand Quarry. The application was forwarded by SEIAA to SEAC for appraisal. The proposed site at (Khasra No. 439) at Village- Fatepur, Tehsil- Burhanpur, District- Burhanpur (MP) 13.600 Ha. The project requires prior EC before commencement of any activity at site.

PP has submitted a copy of approved Mining Plan, DSR report, information in the lease's within 500 meters radius around the site and other requisite information in the prescribed format duly verified in the Collector Office letter no. 159 dated 03/2/2020 has reported that there are no more mines operating or proposed within 500 meters around the said mine.

The case was scheduled in 449nd meeting dated 24/07/2020 for the presentation but neither the Project Proponent (PP) nor his representative was present to explain the query which might be raised or to make any commitment which may be desired by the committee during the deliberation. Committee decided to call the PP in subsequent meetings.

The case was scheduled again for presentation but neither the Project Proponent (PP) nor his representative was present to explain the query which might be raised or to make any commitment which may be desired by the committee during the deliberation. PP was also absent in the 449nd meeting dated 24/07/2020. Committee decided to give last chance to PP for making presentation in the subsequent meetings of SEAC after which the case shall be returned to SEIAA assuming that PP is not interested to continue with the project.

18. Case No 7385/2020 M/s Bamdev Global, authorized person Shri Upendra Gupta, E-91, Shree Nath Vihar, Chilla Road Banda (UP)-210001 Prior Environment Clearance for Sand Quarry in an area of 8.110 ha. (40000 cum per annum) (Khasra No. 209) at Village- Daryapur, Tehsil- Nepanagar, District- Burhanpur (MP)

This is case of Sand Quarry. The application was forwarded by SEIAA to SEAC for appraisal. The proposed site at (Khasra No. 209) at Village- Daryapur, Tehsil- Nepanagar, District- Burhanpur (MP) 8.110 Ha. The project requires prior EC before commencement of any activity at site.

PP has submitted a copy of approved Mining Plan, DSR report, information in the lease's within 500 meters radius around the site and other requisite information in the prescribed format duly verified in the Collector Office letter no. 159 dated 03/2/2020 has reported that there are no more mines operating or proposed within 500 meters around the said mine.

The case was scheduled in 449nd meeting dated 24/07/2020 for the presentation but neither the Project Proponent (PP) nor his representative was present to explain the query which might be raised or to make any commitment which may be desired by the committee during the deliberation. Committee decided to call the PP in subsequent meetings.

The case was scheduled again for presentation but neither the Project Proponent (PP) nor his representative was present to explain the query which might be raised or to make any commitment which may be desired by the committee during the deliberation. PP was also absent in the 449nd meeting dated 24/07/2020. Committee decided to give last chance to PP for making presentation in the subsequent meetings of SEAC after which the case shall be returned to SEIAA assuming that PP is not interested to continue with the project.

(Dr. Anil Sharma)
Member

(Dr. Mohd. Akram Khan)
Member

(Dr. Sonal Mehta)
Member

(Dr. R. Maheshwari)
Member

(Dr. Jai Prakash Shukla)
Member

(Dr. Rubina Chaudhary)
Member

(A. A. Mishra)
Secretary

(Mohd. Kasam Khan)
Chairman

Following standard conditions shall be applicable for the mining projects of minor mineral in addition to the specific conditions and cases appraised for grant of TOR:

Annexure- 'A'

Standard conditions applicable to Stone/Murrum and Soil quarries:

1. Mining should be carried out as per the submitted land use plan and approved mine plan.
2. The lease boundary should be clearly demarcated at site with the given co-ordinates by pillars and fenced from all around the site. Necessary safety signage & caution boards shall be displayed at mine site.
3. Overhead sprinklers arrangements with solar pumps should be provided for dust suppression at the exit of the lease area and fixed types sprinklers on the evacuation road. PP should maintain a log book wherein daily details of water sprinkling and vehicle movement are recorded.
4. Transportation of material shall only be done in covered & PUC certified vehicles with required moisture to avoid fugitive emissions. Transportation of minerals shall not be carried out through forest area without permissions from the competent authority.
5. Mineral evacuation road shall be made pucca (WBM/black top) by PP.
6. Necessary consents shall be obtained from MPPCB and the air/water pollution control measures have to be installed as per the recommendation of MPPCB.
7. Crusher with inbuilt APCD & water sprinkling system shall be installed minimum 100 meters away from the road and 500 meters away from the habitations only after the permissions of MP Pollution Control Board with atleast 03 meters high wind breaking wall of suitable material to avoid fugitive emissions.
8. Thick plantation shall be carryout in the periphery/barrier zone of the lease, mineral evacuation road and common area in the village. Top soil shall be simultaneously used for the plantation within the lease area and no OB/dump shall be stacked outside the lease area. PP would maintain the plants for five years including casualty replacement. PP should also maintain a log book containing annual details of tree plantation and causality replacement and to take adequate precautions so as not to cause any damage to the flora and fauna during mining operations.
9. Appropriate activities shall be taken up for social up-liftment of the area. Funds reserved towards the same shall be utilized through Gram Panchayat/competent authority.
10. Six monthly occupational health surveys of workers shall be carryout and all the workers shall be provided with necessary PPE's. Mandatory facilities such as Rest Shelters, First Aid, Proper Fire Fighting Equipments and Toilets (separate for male & female) shall also be provided for all the mine workers and other staff. Mine's site office, rest shelters etc shall be illuminated and ventilated through solar lights.
11. A separate bank account should be maintained for all the expenses made in the EMP and CER activities by PP for financial accountability and these details should be provided in Annual Environmental Statement. In case the allocated EMP budget for mitigative measures to control the pollution is not utilized fully, the reason of under utilization of budgetary provisions for EMP should be addressed in annual return.
12. To avoid vibration, no overcharging shall be carried out during blasting and muffle blasting shall be adopted. Blasting shall be carried out through certified blaster only and no explosive will be stored at mine site without permission from the competent authority.
13. Mine water should not be discharged from the lease and be used for sprinkling & plantations. For surface runoff and storm water garland drains and settling tanks (SS pattern) of suitable sizes shall be provided.
14. PP shall be responsible for discrepancy (if any) in the submissions made by the PP to SEAC & SEIAA.
15. The amount towards reclamation of the pit and land in MLA shall be carried out through the mining department. The appropriate amount as estimated for the activity by mining department has to be deposited with the Collector to take up the activity after the mine is exhausted.

16. NOC of Gram Panchayat should be obtained for the water requirement and forest department before uprooting any trees in the lease area. PP shall take Socio-economic activities in the region through the 'Gram Panchayat'.
17. The leases which are falling <250 meters of the forest area and PP has obtained approval for the Divisional Level Commissioner committee, all the conditions stipulated by Divisional Level Commissioner committee shall be fulfilled by the PP.
18. The validity of the EC shall be as per the provisions of EIA Notification subject to the following: Expansion or modernization in the project, entailing capacity addition with change in process and or technology and any change in product - mix in proposed mining unit shall require a fresh Environment Clearance.
19. If it being a case of Temporary Permit (TP), the validity of EC should be only up to the validity of TP and PP has to ensure the execution of closure plan.
20. All the mines where production is > 50,000 cum/year, PP shall develop its own website to display various mining related activities proposed in EMP & CER along with budgetary allocations. All the six monthly progress report shall also be uploads on this website along with MoEF&CC & SEIAA, MP with relevant photographs of various activities such as garland drains, settling tanks, plantation, water sprinkling arrangements, transportation & haul road etc. PP or Mine Manager shall be made responsible for its maintenance & regular updation.
21. All the soil queries, the maximum permitted depth shall not exceed 02 meters below general ground level & other provisions laid down in MoEF&CC OM No. L-11011/47/2011-IA.II(M) dated 24/06/2013.
22. The mining lease holders shall after ceasing mining operation, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora , fauna etc. Moreover, A separate budget in EMP & CER shall maintained for development and maintenance of grazing land as per the latest O.M dated 16/01/2020.
23. The project proponent shall follow the mitigation measures provided in MoEFCCs Office Memorandum No. Z-11013/57/2014-IA. II (M) dated 29th October 2014, titled "Impact of mining activities on Habitations-issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".

Annexure- 'B'
Standard conditions applicable for the Sand Mine Quarries*

1. District Authority should annually record the deposition of sand in the lease area (at an interval of 100 meters for leases 10 ha or > 10.00 ha and at an interval of 50 meters for leases < 10 ha.) before monsoon & in the last week of September and maintain the records in RL (Reduce Level) Measurement Book. Accordingly authority shall allow lease holder to excavate only the replenished quantity of sand in the subsequent year.
2. The lease boundary should be clearly demarcated at site with the given co-ordinates by pillars. Necessary safety signage & caution boards shall be displayed at mine site.
3. Overhead sprinklers arrangements with solar pumps should be provided for dust suppression at the exit of the lease area and fixed types sprinklers on the evacuation road. PP should maintain a log book wherein daily details of water sprinkling and vehicle movement are recorded.
4. Only registered vehicles/tractor trolleys which are having the necessary registration and permission for the aforesaid purpose under the Motor Vehicle Act and also insurance coverage for the same shall alone be used for said purpose.

5. Transportation of material shall only be done in covered & PUC certified vehicles with required moisture to avoid fugitive emissions. Transportation of minerals shall not be carried out through forest area without permissions from the competent authority.
6. Mineral evacuation road shall be made Pucca (WBM/black top) by PP.
7. Sand and gravel shall not be extracted up to a distance of 1 kilometer (1Km) from major bridges and highways on both sides, or five times (5x) of the span (x) of a bridge/public civil structure (including water intake points) on up-stream side and ten times (10x) the span of such bridge on down-stream side, subjected to a minimum of 250 meters on the upstream side and 500 meters on the downstream side.
8. Mining depth should be restricted to 3 meters or water level, whichever is less and distance from the bank should be 1/4th or river width and should not be less than 7.5 meters. No in-stream mining is allowed. Established water conveyance channels should not be relocated, straightened, or modified.
9. Demarcation of mining area with pillars and geo-referencing should be done prior to the start of mining.
10. PP shall carry out independent environmental audit atleast once in a year by reputed third party entity and report of such audit be placed on public domain.
11. No Mining shall be carried out during Monsoon season.
12. The mining shall be carried out strictly as per the approved mine plan and in accordance with the Sustainable Sand Mining Management Guidelines, 2016 and Enforcement & Monitoring Guidelines for Sand Mining, 2020 issued by the MoEF&CC ensuring that the annual replenishment of sand in the mining lease area is sufficient to sustain the mining operations at levels prescribed in the mining plan.
13. If the stream is dry, the excavation must not proceed beyond the lowest undisturbed elevation of the stream bottom, which is a function of local hydraulics, hydrology, and geomorphology.
14. After mining is complete, the edge of the pit should be graded to a 2.5:1 slope in the direction of the flow.
15. Necessary consents shall be obtained from MPPCB and the air/water pollution control measures have to be installed as per the recommendation of MPPCB.
16. Thick plantation shall be carryout on the banks of the river adjacent to the lease, mineral evacuation road and common area in the village. PP would maintain the plants for five years including casualty replacement. PP should also maintain a log book containing annual details of tree plantation and causality replacement and to take adequate precautions so as not to cause any damage to the flora and fauna during mining operations.
17. Appropriate activities shall be taken up for social up-liftment of the area. Funds reserved towards the same shall be utilized through Gram Panchayat/competent authority.
18. Six monthly occupational health surveys of workers shall be carryout and all the workers shall be provided with necessary PPE's. Mandatory facilities such as Rest Shelters, First Aid, Proper Fire Fighting Equipments and Toilets (separate for male & female) shall also be provided for all the mine workers and other staff. Mine's site office, rest shelters etc shall be illuminated and ventilated through solar lights.
19. A separate bank account should be maintained for all the expenses made in the EMP and CER activities by PP for financial accountability and these details should be provided in Annual Environmental Statement. In case the allocated EMP budget for mitigative measures to control the pollution is not utilized fully, the reason of under utilization of budgetary provisions for EMP should be addressed in annual return.
20. PP shall be responsible for discrepancy (if any) in the submissions made by the PP to SEAC & SEIAA.
21. The amount towards reclamation of the pit and land in MLA shall be carried out through the mining department. The appropriate amount as estimated for the activity by mining department has to be deposited with the Collector to take up the activity after the mine is exhausted.
22. NOC of Gram Panchayat should be obtained for the water requirement and forest department before uprooting any trees in the lease area.

23. The leases which are falling <250 meters of the forest area and PP has obtained approval for the Divisional Level Commissioner committee, all the conditions stipulated by Divisional Level Commissioner committee shall be fulfilled by the PP.
24. The validity of the EC shall be as per the provisions of EIA Notification subject to the following: Expansion or modernization in the project, entailing capacity addition with change in process and or technology and any change in product - mix in proposed mining unit shall require a fresh Environment Clearance.
25. If it being a case of Temporary Permit (TP), the validity of EC should be only up to the validity of TP and PP has to ensure the execution of closure plan.
26. A separate budget in EMP & CER shall maintained for development and maintenance of grazing land as per the latest O.M dated 16/01/2020.
27. The project proponent shall follow the mitigation measures provided in MoEFCCs Office Memorandum No. Z-11013/57/2014-IA. II (M) dated 29th October 2014, titled "Impact of mining activities on Habitations-issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".

Annexure- 'C'

Standard conditions applicable for the Sand deposits on Agricultural Land/ Khodu Bharu Type Sand Mine Quarries*

1. Mining should be done only to the extent of reclaiming the agricultural land.
2. Only deposited sand is to be removed and no mining/digging below the ground level is allowed.
3. The mining shall be carried out strictly as per the approved mining plan.
4. The lease boundary should be clearly demarcated at site with the given co-ordinates by pillars and necessary safety signage & caution boards shall be displayed at mine site.
5. Overhead sprinklers arrangements with solar pumps should be provided for dust suppression at the exit gate of the lease area and fixed types sprinklers on the evacuation road. PP should maintain a log book wherein daily details of water sprinkling and vehicle movement are recorded.
6. The mining activity shall be done as per approved mine plan and as per the land use plan submitted by PP.
7. Transportation of material shall only be done in covered & PUC certified vehicles with required moisture to avoid fugitive emissions. Transportation of minerals shall not be carried out through forest area without permissions from the competent authority.
8. Mineral evacuation road shall be made Pucca (WBM/black top) by PP.
9. For carrying out mining in proximity to any bridge and/or embankment, appropriate safety zone on upstream as well as on downstream from the periphery of the mining site shall be ensured taking into account the structural parameters, location aspects, flow rate, etc., and no mining shall be carried out in the safety zone.
10. No Mining shall be carried out during Monsoon season.
11. The mining shall be carried out strictly as per the approved mine plan and in accordance with the Sustainable Sand Mining Management Guidelines, 2016 issued by the MoEF&CC.
12. Necessary consents shall be obtained from MPPCB and the air/water pollution control measures have to be installed as per the recommendation of MPPCB.
13. Thick plantation shall be carryout on the banks of the river adjacent to the lease, mineral evacuation road and common area in the village. PP would maintain the plants for five years including casualty replacement. PP should also maintain a log book containing annual details of tree plantation and causality replacement and to take adequate precautions so as not to cause any damage to the flora and fauna during mining operations.
14. Appropriate activities shall be taken up for social up-liftment of the area. Funds reserved towards the same shall be utilized through Gram Panchayat/competent authority.

15. Six monthly occupational health surveys of workers shall be carryout and all the workers shall be provided with necessary PPE's. Mandatory facilities such as Rest Shelters, First Aid, Proper Fire Fighting Equipments and Toilets (separate for male & female) shall also be provided for all the mine workers and other staff. Mine's site office, rest shelters etc shall be illuminated and ventilated through solar lights.
16. A separate bank account should be maintained for all the expenses made in the EMP and CER activities by PP for financial accountability and these details should be provided in Annual Environmental Statement. In case the allocated EMP budget for mitigative measures to control the pollution is not utilized fully, the reason of under utilization of budgetary provisions for EMP should be addressed in annual return.
17. PP shall be responsible for discrepancy (if any) in the submissions made by the PP to SEAC & SEIAA.
18. The amount towards reclamation of the pit and land in MLA shall be carried out through the mining department. The appropriate amount as estimated for the activity by mining department has to be deposited with the Collector to take up the activity after the mine is exhausted.
19. NOC of Gram Panchayat should be obtained for the water requirement and forest department before uprooting any trees in the lease area.
20. The leases which are falling <250 meters of the forest area and PP has obtained approval for the Divisional Level Commissioner committee, all the conditions stipulated by Divisional Level Commissioner committee shall be fulfilled by the PP.
21. The validity of the EC shall be as per the provisions of EIA Notification subject to the following: Expansion or modernization in the project, entailing capacity addition with change in process and or technology and any change in product - mix in proposed mining unit shall require a fresh Environment Clearance.
22. If it being a case of Temporary Permit (TP), the validity of EC should be only up to the validity of TP and PP has to ensure the execution of closure plan.
23. A separate budget in EMP & CER shall maintained for development and maintenance of grazing land as per the latest O.M dated 16/01/2020.
24. The project proponent shall follow the mitigation measures provided in MoEFCCs Office Memorandum No. Z-11013/57/2014-IA. II (M) dated 29th October 2014, titled "Impact of mining activities on Habitations-issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".

Annexure- 'D'

General conditions applicable for the granting of TOR

1. The date and duration of carrying out the baseline data collection and monitoring shall be informed to the concerned Regional Officer of the M.P Pollution Control Board.
2. During monitoring, photographs shall be taken as a proof of the activity with latitude & longitude, date, time & place and same shall be attached with the EIA report. A drone video showing various sensitivities of the lease and nearby area shall also be shown during EIA presentation.
3. An inventory of various features such as sensitive area, fragile areas, mining / industrial areas, habitation, water-bodies, major roads, etc. shall be prepared and furnished with EIA.
4. An inventory of flora & fauna based on actual ground survey shall be presented.
5. Risk factors with their management plan should be discussed in the EIA report.
6. The EIA report should be prepared by the accredited consultant having no conflict of interest with any committee processing the case.
7. The EIA document shall be printed on both sides, as far as possible.
8. All documents should be properly indexed, page numbered.
9. Period/date of data collection should be clearly indicated.

10. The letter /application for EC should quote the SEIAA case No./year and also attach a copy of the letter prescribing the TOR.
11. The copy of the letter received from the SEAC prescribing TOR for the project should be attached as an annexure to the final EIA/EMP report.
12. The final EIA/EMP report submitted to the SEIAA must incorporate all issues mentioned in TOR and that raised in Public Hearing with the generic structure as detailed out in the EIA report.
13. Grant of TOR does not mean grant of EC.
14. The status of accreditation of the EIA consultant with NABET/QCI shall be specifically mentioned. The consultant shall certify that his accreditation is for the sector for which this EIA is prepared. If consultant has engaged other laboratory for carrying out the task of monitoring and analysis of pollutants, a representative from laboratory shall also be present to answer the site specific queries.
15. On the front page of EIA/EMP reports, the name of the consultant/consultancy firm along with their complete details including their accreditation, if any shall be indicated. The consultant while submitting the EIA/EMP report shall give an undertaking to the effect that the prescribed TORs (TOR proposed by the project proponent and additional TOR given by the MOEF & CC) have been complied with and the data submitted is factually correct.
16. While submitting the EIA/EMP reports, the name of the experts associated with involved in the preparation of these reports and the laboratories through which the samples have been got analyzed should be stated in the report. It shall be indicated whether these laboratories are approved under the Environment (Protection) Act, 1986 and also have NABL accreditation.
17. All the necessary NOC's duly verified by the competent authority should be annexed.
18. PP has to submit the copy of earlier Consent condition /EC compliance report, whatever applicable along with EIA report.
19. The EIA report should clearly mention activity wise EMP and CER cost details and should depict clear breakup of the capital and recurring costs along with the timeline for incurring the capital cost. The basis of allocation of EMP and CER cost should be detailed in the EIA report to enable the comparison of compliance with the commitment by the monitoring agencies.
20. A time bound action plan should be provided in the EIA report for fulfillment of the EMP commitments mentioned in the EIA report.
21. The name and number of posts to be engaged by the PP for implementation and monitoring of environmental parameters should be specified in the EIA report.
22. EIA report should be strictly as per the TOR, comply with the generic structure as detailed out in the EIA notification, 2006, baseline data is accurate and concerns raised during the public hearing are adequately addressed.
23. The EIA report should be prepared by the accredited consultant having no conflict of interest with any committee processing the case.
24. Public Hearing has to be carried out as per the provisions of the EIA Notification, 2006. The issues raised in public hearing shall be properly addressed in the EMP and suitable budgetary allocations shall be made in the EMP and CER based on their nature.
25. Actual measurement of top soil shall be carried out in the lease area at minimum 05 locations and additionally N, P, K and Heavy Metals shall be analyzed in all soil samples. Additionally in one soil sample, pesticides shall also be analysed.
26. A separate budget in EMP & CER shall maintained for development and maintenance of grazing land as per the latest O.M dated 16/01/2020.

27. PP shall submit biological diversity report stating that there is no adverse impact in- situ and on surrounding area by this project on local flora and fauna's habitat, breeding ground, corridor/ route etc. This report shall be filed annually with six-monthly compliance report.
28. The project proponent shall provide the mitigation measures as per MoEFCCs Office Memorandum No. Z-11013/57/2014-IA. II (M) dated 29th October 2014, titled "Impact of mining activities on Habitations-issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area" with EIA report.

FOR PROJECTS LOCATED IN SCHEDULED (V) TRIBAL AREA , following should be studied and discussed in EIA Report before Public Hearing as per the instruction of SEIAA vide letter No. 1241 dated 30/07/2018.

29. Detailed analysis by a National Institute of repute of all aspects of the health of the residents of the Schedule Tribal block.
30. Detailed analysis of availability and quality of the drinking water resources available in the block.
31. A study by CPCB of the methodology of disposal of industrial waste from the existing industries in the block, whether it is being done in a manner that mitigate all health and environmental risks.
32. The consent of Gram Sabha of the villages in the area where project is proposed shall be obtain.