Addl. Pr. Chief Conservator of Forests  
Ministry of Environment, Forest and Climate Change  
Regional Office (WCZ), Ground Floor, East Wing  
New Secretariat Buildings, Civil Lines  
Nagpur – 440 001

Sub: Six Monthly Progress Report (April to September’ 2017) on Environmental Compliance in respect of 4 MTPA Iron Ore Beneficiation Plant of M/s. NMDC Limited at Bacheli, South Bastar Dantewada District, C.G.


Sir,

We have received Environmental Clearance for proposed 4 MTPA Iron Ore Beneficiation Plant at Bacheli, South Bastar District, C.G. from by MOEFCC vide letter dated 27/4/2017. Further, Permission to Establish / CFE under Air and Water Acts has also been obtained from CECB, Raipur on 17/10/2017.

Now, we are herewith submitting Six-Monthly Progress Report for the period April to September’ 2017 on conditions stipulated in E.C. letter in respect of above mentioned project. The Report is also placed in NMDC website at [www.nmdc.co.in](http://www.nmdc.co.in)

Thanking you

Yours faithfully,

(M. Jayapal Reddy)
Jt. General Manager (Env)

Encl: a/a

Copy for kind information to:
<table>
<thead>
<tr>
<th>S. no</th>
<th>SPECIFIC CONDITION</th>
<th>COMPLIANCE STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>i.</td>
<td>M/S NMDC Limited shall obtain separate environmental clearance for the slurry pipeline under the project activity I(a) (ii) of Schedule of the EIA Notification, 2006 if applicable.</td>
<td>Agreed</td>
</tr>
<tr>
<td>ii.</td>
<td>The project proponent shall install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office.</td>
<td>NMDC has initiated the process for purchasing of 24x7 air monitoring devices which shall be ready before plant operation.</td>
</tr>
<tr>
<td>iii.</td>
<td>The environmental clearance is subject to the grant of forestry clearance.</td>
<td>Final stage Forest Clearance for the diversion of 33ha Forest land for Iron Ore Beneficiation Plant has been granted vide MoEFCC, Nagpur letter No. F.No FC-II/CH-17/2015-NGP/2623 dated 27/09/2017. The Forest land is yet to be handed over to NMDC Ltd. by C.G Forest department.</td>
</tr>
<tr>
<td>iv</td>
<td>The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be adhered to.</td>
<td>Agreed. Project will ensure that the National Ambient Air Quality Emission Standard issued by Ministry dated 16th November, 2009 is followed.</td>
</tr>
<tr>
<td>v</td>
<td>Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th</td>
<td>Agreed. Project will ensure that the National Ambient Air Quality Emission Standard issued by</td>
</tr>
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<tr>
<td><strong>May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.</strong></td>
<td><strong>Ministry dated 16th November, 2009 is followed.</strong></td>
<td></td>
</tr>
<tr>
<td>vi</td>
<td>Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.</td>
<td>➢ All efforts shall be made by the project to control the vehicular pollution &amp; dust pollution against the specified norms.</td>
</tr>
</tbody>
</table>
| vii | 'Zero' effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises. |  ➢ Agreed.  
➢ The project will ensure the same. |
| viii | Small seasonal nallas flowing in the beneficiation plant area shall be systematically diverted. |  ➢ Nallas flowing in the beneficiation plant area will be systematically diverted. |
| ix | Lean tailings generated in the process shall be impounded in existing tailing dams. Intermediate dykes shall be constructed within tailing dam for storage of lean Tailings so as to avoid direct contact with slimes already present in tailing dams. Clear water shall be allowed to discharge into downstream nallas through decanting system provided in tailing dams. |  ➢ Agreed.  
➢ The project will ensure the same. |
| x | At the terminus of the pipeline at Nagarnar, the ore slurry shall be filtered. The recovered filtered water shall be used for industrial purposes in the plants. For transportation of 4 MTPA iron ore concentrate, shut down-restart mode shall be adopted for reduction in water & power requirement as compared to normal operation in batch mode. |  ➢ Agreed.  
➢ The project will ensure the same. |
<p>| xi | Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act whichever are more stringent. |  ➢ The project will ensure that Environment monitoring is carried out systematically and all the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act shall be followed. |</p>
<table>
<thead>
<tr>
<th></th>
<th>Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and quarterly reports regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office, SPCB and CPCB.</th>
<th>Agreed. The project shall ensure the same.</th>
</tr>
</thead>
<tbody>
<tr>
<td>xiii</td>
<td>Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For this purpose, the schedule of health examination of the workers should be drawn and followed scrupulously.</td>
<td>Agreed. The project shall ensure the same.</td>
</tr>
<tr>
<td>xiv</td>
<td>A time bound action plan shall be submitted to reduce solid waste generation due to the project related activity, its proper utilization and disposal.</td>
<td>Agreed. The project shall ensure the same.</td>
</tr>
<tr>
<td>xv</td>
<td>A Risk and Disaster Management Plan shall be prepared and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of environment clearance letter.</td>
<td>Risk Assessment &amp; Disaster Management Plan had been incorporated in Chapter 7 of the EIA-EMP Report &amp; submitted to MOEFCC along with EIA report. A copy of the Risk Assessment &amp; Disaster Management Plan is again enclosed as Annexure-1</td>
</tr>
<tr>
<td>xvi</td>
<td>Green belt shall be developed by planting native and broad leaved tree species in consultation with local DFO, local community and as per CPCB guidelines.</td>
<td>The project is committed for Green belt development. Plantation of native and broad-leaved tree species in consultation with local DFO, local community and as per CPCB guidelines will be undertaken.</td>
</tr>
<tr>
<td>xvii</td>
<td>The Company shall submit, within three months, their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/procedure to bring into focus any infringement/deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and</td>
<td>The Corporate Environment Responsibility is enclosed as Annexure-2</td>
</tr>
<tr>
<td>xviii</td>
<td>The project proponent shall provide for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.</td>
<td>➢ Solar light system for common areas around the project area shall be provided.</td>
</tr>
<tr>
<td>xix</td>
<td>The project proponent shall provide for LED lights in their offices and residential areas.</td>
<td>➢ LED lights in office premises and residential areas shall be provided.</td>
</tr>
<tr>
<td>xx</td>
<td>At least 2.5% of the total cost of the project shall be earmarked for the Enterprise Social Commitment (ESC) based on issues raised during public consultation, local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured accordingly in a time bound manner.</td>
<td>➢ Agreed. The project shall ensure the same.</td>
</tr>
<tr>
<td>xxi</td>
<td>The proponent shall prepare a detailed CSR Plan for the next 5 years including annual plans for each year for the existing-cum-expansion project, including village-wise, sector-wise (Health, Education, Sanitation, Skill Development and Infrastructure activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% of annual profits as provided for under Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be</td>
<td>➢ Agreed. The project shall ensure the same.</td>
</tr>
</tbody>
</table>
submitted as part of the Compliance Report to the Regional Office of the Ministry. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.

| xxii | 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 and health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project. |
|      | Agreed. The project shall ensure the same. |

**GENERAL CONDITIONS**

| i    | The project authorities must strictly adhere to the stipulations made by the Chhattisgarh Pollution Control Board and the State Government. |
|      | Project is committed for strict adherence of the stipulations made by the Chhattisgarh Pollution Control Board and the State Government. |

| ii   | No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEFCC). |
|      | Agreed. |

| iii  | At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM$_{10}$, PM$_{2.5}$, S0$_2$ and NO$_x$ are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Nagpur and the SPCB/CPCB once in six months. |
|      | Agreed. The project shall ensure the same. |

| iv   | Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose. |
|      | Agreed. The project shall ensure the same. |
| v   | The overall noise levels in and around the plant area shall be kept well within the standards (85dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (night time). | Agreed. The project shall ensure the same. |
| vi  | Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act. | Agreed. The project shall ensure the same. |
| vii | The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table. | Agreed. The project shall ensure the same. |
| viii| The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc. | Agreed. The project shall ensure the same. |
| ix  | Requisite funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change (MoEFCC) as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Nagpur. The funds so provided shall not be diverted for any other purpose. | Funds earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change (MoEFCC) as well as the State Government shall not be diverted for any other purpose. |
| x | A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent. | Copy of clearance letter has been sent to concerned panchayat, Zilla parishad/ Municipal corporation, urban Local body etc. Details enclosed as Annexure-3. Clearance letter has also been put on the website of NMDC. |
| xi | The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEFCC at Nagpur. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM$_{10}$, SO$_2$, NO$_x$ (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain. | Agreed. Project shall ensure the same. |
| xii | The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEFCC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Nagpur / CPCB / SPCB shall monitor the stipulated conditions. | Agreed. Project shall ensure the same. |
| xiii | The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently. | Agreed. Project shall ensure the same. |
shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MoEFCC at Nagpur by e-mail.

**xiv**

The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEFCC) at http://envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Nagpur.

- NMDC has informed the public regarding award of Environmental Clearance by publishing the news in two widely circulated local newspapers within seven days from the date of issue of the clearance letter, in vernacular language. A copy of the above advertisement is enclosed as **Annexure-4**.
- A copy of the same has been forwarded to Regional office at Nagpur which is enclosed as **Annexure-5**.

**xv**

Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

- Agreed. Project shall ensure the same.

**Note:** Permission to establish / CFE for Iron Ore Beneficiation Plant – 4.0 MTPA obtained from Member Secretary, Chhattisgarh Environment Conservation Board, Raipur vide letter no: 3918/TS/CECB/2017 dated 17/10/2017. Copy of CFE is enclosed as **Annexure-6**.

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![Signature]

**Wajit Kumar**  
General Manager  
Slurry Pipe Line Project  
NMDC Ltd., Jagdalpur
CHAPTER - 7
ADDITIONAL STUDIES
7.1 Risk Assessment, Occupational Health & Disaster Management plan:

Although Beneficiation plant & Slurry Pipeline System will not cause any disastrous emergencies, control measures due to accidental discharge, spillages of slurry during transportation, storage and manufacturing process needs to be assessed.

The company has established a system for preventive maintenance to minimize emergency events. A team headed by Safety Officer is responsible for the above. He reports to Plant Head. Emergency events that can arise as listed below

i. Failure of dust collection device like, Bag house etc.

ii. Accidental spillage of Iron or dust containing Iron.

iii. Failure of the dust extraction network.

Company observes the following for assessment of emergency events:

i. A formal and written emergency plan related to health risks is in place.

ii. The team has been well acquainted with the major potential Hazard sources and locations.

iii. Visual inspection of the pollution control systems on a daily basis is carried out.

iv. The emergency plan clearly defines persons responsible in case of an incidental failure.

v. There is an annual engineering check of the equipments.

vi. A record of the maintenance activities are kept for review.
vii. The senior member of the team inspects the operation. Any anomaly found is directly reported to Plant Head and a record is maintained in this regard.

7.2 Training to Employees:

All employees are educated to take precautions and use all protective measures to control dust in working environment. They are well informed of the consequences of ignoring the precautions. Personal protective equipments as per BIS code of practices IS; 12078: 19817 are provided to the employees. Pictorial warning signs and precautionary notices as per BIS code of practices IS; 12078: 19817 (Part-I); 1987 (reaffirmed 1997) are displayed. All work places where accident may cause a hazard are clearly indicated as a “hazard area”, with well displayed signboard along with effects on health. The employees are educated about the safety features through written literature, pictorial signature and color coded signs.

Record of education & training activities are maintained. All employees are provided information booklet in Hindi & English language, on the risk related to project activities and recommendations to protect themselves from undue exposures.

7.3 Occupational Health:

The occupational health surveillance program is implemented to address pre employment & periodic health examination. Every employee prior to his appointment undergoes the pre employment medical examination arranged by the project proponent and issued an Appointment letter only on getting fitness certificate issued by competent authority. Scheme for health surveillance include periodical examination of workers. Occupational health surveillance is carried out by occupational, physical or chest physician, trained in occupational medicine. All the above are provided by the company free of cost.
The medical records are maintained & stored for a period of 15 years, following the termination of employment or for 40 years after first day of employment, whichever is later. All employees are provided with medical book.

The occupational health surveillance program addresses mainly the following aspects:

i. Pre employment medical examination

ii. Periodic medical examination

iii. Medical examination on cessation of employment

iv. Maintenance of Medical records & health education

Periodical medical examination (PME) is carried out as per DGMS guidelines at Occupational Health Centre (OHS), NMDC -Apollo Central Hospital, Bacheli for all employees once in 5 years. For above 45 years of age employees medical examination is done once in 3 years. Pre-retirement medical examination is also carried out for the employees.

NMDC is in the process of getting Integrated Management System covering Quality, Environment & Occupational Health for its existing projects at Bacheli. This certification will extend to the proposed Beneficiation plant also.

7.4 Workplace Monitoring:

Following general guidelines (as per BIS; 11451: 2006 code of practice for preparing Workplace Monitoring Schedule) are followed:

i. Once in a month, where dust concentration is likely to exceed prescribed exposure limit.

ii. Once in three months where dust concentration is likely to be between exposure limit and action level.
iii. Once in every 6 to 12 months where dust concentration is below action &
once in every 12 months at all work spots where there are exposures ir-
respective of dust concentrations.

7.4.1 Environmental Laboratory:

NMDC has a well established NABL certified Chemical Laboratory. In
house monitoring for ambient air quality, work zone monitoring for total dust
content, stack monitoring, noise monitoring are being done regularly to assess
the pollutant concentrations. Most of the instruments required for environmen-
tal monitoring are available. Outsourcing is also done for certain environment-
al parameters through MoEF approved labs.

7.5 Disaster Management Plan:

An important element of mitigation is emergency planning, i.e. recogn-
izing that accidents are possible, assessing the consequences of such accidents
and deciding on emergency procedures, both onsite and offsite, that would
need to be implemented in the event of an emergency.

Emergency/ disaster planning is just one aspect of safety and cannot be
considered in isolation. M/s NMDC Limited. fully endorse this view and hence
a Disaster Management Plan is prepared to ensure that the necessary stan-
dards, appropriate to the safety legislation, are in place.

The important elements of disaster planning are broadly classified as fol-
low:

- Identification of various scenarios
- Advance planning to overcome the problem
- Actions in case of disaster phase, which includes warning, evacuation of
  personnel, rescue relief operations to people affected in mishaps & con-
  tainment of a disaster.

Ecomen Laboratories Pvt. Ltd.
7.6 Objectives of the Plan:

The overall objectives of the emergency plan are:

a) To localise the emergency and, if possible eliminate it and
b) To minimize the effects of accident on people and property

7.7 Identification and assessment of hazards:

The equipment are designed and selected with utmost care to ensure the minimization of Hazards. Care will be taken in the following areas namely:

a) Material storage and distribution
b) Dispatch of finished product

7.7.1 Hazardous areas in the plant:

Any failure of storage tanks and pipelines could be a source of hazard in the immediate surroundings.

7.7.2 Likely fire hazards:

The operation involving handling and use of flammable materials, which are prone to fire risk and hence their installation areas need special attention not only in design erection but also during operation/ maintenance to ensure fire safety.

The fire hazards may occur in the following units:

<table>
<thead>
<tr>
<th>S.No</th>
<th>Type</th>
<th>Quantity</th>
<th>Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HSD for 2 DG sets of 1000 KVA</td>
<td>500 liters/day</td>
<td>No storage, NMDC own diesel pumps at Bacheli</td>
</tr>
<tr>
<td>2</td>
<td>Oil for 2 DG sets of 1000 KVA</td>
<td>5 liters/day</td>
<td>Drum for 30 days</td>
</tr>
</tbody>
</table>
7.7.3 On-site emergency planning:

The on-site emergency plan would be related to the final assessment and it is the responsibility of the Works Management to formulate it. The plan must therefore, be specific to the site.

The plan sets out the way in which designated people at the site of the incident can initiate supplementary action either inside, or outside the works, at an appropriate time. An essential element of the plant is the provision to make safe the affected unit, for example by shutting it down. The plan also contains the full sequence of key personnel to be called in from other sections or from off site.

7.7.4 Appointment of personnel and delegation of duties:

Effective emergency plan requires that, in an event of an accident, nominated individuals are given specific responsibilities, often separate from their day-to-day activities. The two principal people are the site incident controller and the site main controller.

The site incident controller takes control of handling the incident. He will often be the person in charge of the plant at the time of the incident and should provide 24-hour cover where shift operation applies. The site incident controller will have to take decisions involving neighbouring area, perhaps to be involved in an escalating emergency, if it is not shut down.

Apart from the two site controllers, other works personnel have key roles to play in the implementation of the emergency plan. These include senior management of plants not directly involved in the emergency, first aiders, atmospheric monitoring staff, casualty reception staff and public relations staff to keep liaison with the District Authorities and Media. Every individual needs
to be aware of the emergency pre-planning and the precise nature of their roles.

7.7.5 Emergency Control Center:

The emergency control center is the place from where the operations to handle the emergency is directed and coordinated. It is manned by the site main controller, key personnel and the senior officers of the fire and police services.

The center is equipped to receive and transmit information and directions from and to the incident controller and other areas of the works, as well as outside.

Emergency control center therefore should contain the following:

a) An adequate number of external telephones;
b) An adequate number of internal telephones;
c) A plan of the works, to show:
   i) Areas where HSD & other inflammable materials are kept.
   ii) Sources of safety equipment;
   iii) The fire-fighting system and additional sources of water;
   iv) Entrances & Roadways, including latest information on road network;
   v) Assembly points,
   vi) The location of the works in relation to the surrounding community.
   vii) Lorry parking,
   viii) Roll of employee,
   ix) A list of key personnel, with addresses, telephone/mobile numbers, etc.
7.7.6 Action on site:

The primary purpose of the on-site emergency plan is to control and contain the incident so as to prevent it from spreading to nearby area. It is not possible to cover every eventuality in the plan and the successful handling of the emergency will depend on appropriate action and decisions being taken on the spot. Other important aspects considered include the following:

a) Evacuation of non essential personnel
b) Accounting for personnel affected
c) Access to recording personnel for sending the information to the friends and relatives.
d) Public relations
e) Rehabilitation of the affected persons

7.8 Post disaster analysis and evaluation:

When the emergency is over, the team will carry out a detailed analysis of the causes of the accident, evaluate the influence of various factors and minimize them for future. At the same time the adequacy of the Disaster Preparedness Plan is also evaluated and shortcomings are ratified for subsequent improvement of the plan.

7.9 Emergency services:

The provision of following emergency services has been made available in the existing plant

a) Fire protection system
b) Medical facilities
c) Rescue facilities
d) Plant safety arrangements

e) Emergency action within 15 minutes of occurrence.

7.10 Off-site emergency plan:

7.10.1 Introduction:

The off-site emergency plan is an integral part of any major hazard control system. It is based on those accidents identified by the works management, which could affect people and the environment outside the works. Thus, the off-site plan follows logically from the analysis that took place to provide the basis for the on-site plan and the two plans therefore complement each other. The key feature of a good off-site emergency plan is flexibility in its application to emergencies other than those specifically included in the formation of the plan. The roles of the various parties that may be involved in the implementation of an off-site plan are described in this section. The responsibility for the off-site plan is likely to rest either with the works management or with the local authority.

Some of the aspects included in off-site emergency plan are as follows:

7.10.2 Organization:

Details of command structure, warning system, implementation procedures, emergency control centers, Names and appointments of incident controller, site main controller, their deputies and other key personnel.

7.10.3 Communications:

Identification of personnel involved, communication center, call signs, network, list of telephone numbers.
7.10.4 Special emergency equipment:

Details of availability and location of heavy lifting gear, bulldozers, specified fire-fighting equipment, fireboats.

7.10.5 Voluntary Organizations:

Details of Organizations, telephone numbers, resources, etc.

7.10.6 Meteorological information:

Arrangements for obtaining details of weather conditions prevailing at the time and weather forecasts.

7.10.7 Humanitarian arrangements:

Transport, evacuation centers, emergency feeding, treatment of injured, first aid, ambulances, temporary mortuaries.

7.10.8 Public information:

Arrangements for (a) dealing with the media-press office, (b) informing relatives, etc.

7.11 Assessment:

Arrangements for (a) collecting information on the causes of the emergency (b) reviewing the efficiency and effectiveness of all aspects of the emergency plan.

7.12 Role of the emergency co-coordinating officer:

The various emergency services are coordinated by an emergency co-coordinating officer (ECO). The ECO liaise closely with the site main controller.
Again depending on local arrangements, for very severe incidents with major or prolonged off-site consequences, the external control passes to a senior authority/administrator.

7.12.1 Role of major hazard works management:

The role of works management in off-site emergency planning is to establish liaison with those preparing the plans and to provide information appropriate to such plans.

Information is provided by works management to all the outside organizations, which involve in handling the emergency off-site and which are familiarized with the technical aspects of the works activities, e.g. emergency services, medical departments etc.

7.12.2 Role of the Fire Extinction authorities:

The control of fire is normally the responsibility of the senior fire brigade officer, on arrival at the site. The senior fire brigade officer also has a similar responsibility for other events, such as explosions and toxic releases. Fire authorities get familiarized with the location on site of all stores of flammable materials, water and foam supply points and fire-fighting equipments.

7.12.3 Role of the health authorities:

Health authorities, including doctors, surgeons, hospitals, ambulances and so on, have a vital part to play, following a major accident and they form an integral part of any emergency plan.

For major fires, injuries will be the result of the effects of thermal radiation to a varying degree and the knowledge and experience to handle this in all, available nearby hospitals is essential.
7.12.4 Role of the Government safety authority:

The factory inspectors can visit/check the off-site plan and the arrangements made for handling emergencies of all types including major emergencies. The advice of Factory inspectors is incorporated from time to time.
प्रिन्ट ऐन डी सी निरीक्षक

नंगपत्र प्रयोगविद्या नीति

प्राप्तव्यस्ती, धनित गोरे, धर्म, अधिक संस्थान के स्थापत्य हैं। यह अध्यक्ष, भवन और संसाधन में इस्तेहार प्रमुख हो चुकी है। यह नीति, विवेक का विवेचना करता है और अध्यक्ष धर्मनाथ निरीक्षक (निरीक्षक-14/1111) जैशी कार्यक्षेत्र (मित-5,10 एवं 11.3) और कर्नल, धनित गोरे में दोस्ती से अध्यक्ष परिषद्, दोस्ती से। एक ऐसी जीवन गुण पदार्थ, पदार्थ या के महामायों, इन में लक्ष्य परिवर्तन और स्वच्छ प्रदेश, जिला स्थिति के प्रभाव के रूप में रुपन्याय प्रा कर प्रभाव था का सर का। प्राप्तव्यस्ती एक अध्यक्ष निरीक्ष

प्रयोगविद्या संगठा होने के नाते धनित गोरे भवन और अध्यक्ष परीक्षण में संस्थापक, जिला पूर्वी में। कुछ स्थानों, लोक अध्यक्ष कारण, जीवन में फूल फूल दिन परिषद्, प्राप्तव्य में उन्हें एक संवेदन धर्मनाथ प्रदेर के सीढ़ियाँ जिला में सेमिनार कारण, जीवन, जिला पूर्वी में। ये ही, बैठक, धनित गोरे, अध्यक्ष परिषद्, धनित गोरे, धर्मनाथ भवन के फ़िलिपुर में निशेच-13, समय प्रदेर, उम्रिता और शाहिदुल अली के प्राप्तव्यस्ती तथा चेताइ/वित्तनुक. नंगपत्र के नामकरण में धनित लालवरिता शह पैसेटेक्सन संबंध की योजना है।

अन: ऐसे निरीक्षक के लिए प्रभाव रहे हैं।

लागू, निरीक्षित अपेक्षाओं में भवन प्रयोगविद्या और अंतर साधनिक सिध्दरूप हेतु इन प्राप्तव्य संघ और धनित द्वारा संस्थान की सुरक्षा, स्थापना और प्रतिकृत पद्धतियों को अनुकूल बना, लक्ष्य और समर्पित गतिविधियों के क्षेत्र में प्रयोगविद्या प्रभाव की रक्षा कर दिया गया है।

प्रयोगविद्या पर प्रभाव के निरीक्षक प्राप्तव्य में संगठित करने के हेतु हम भारत को भारतीय धर्मशास्त्री जी से ध्यान करते हैं।

स्थानीय लागू, परिचय एवं धर्म प्रसिद्ध शहर के अनुप्रयोग और मोटरिस्ट गतिविधियों को सुरक्षित करते हैं। निरीक्षक पूर्वी और सम्पर्क मामले में इसी स्थान की होगी।

धर्म तत्दात्त्विक और प्रभावण इन प्राप्तव्य धर्मवर्तियों, स्मारक संख्याक संस्थान और इंजनियर पद्धतियों के बीच प्रयोगविद्या जगतुत्तक को बढ़ावा देते हैं।

स्थानीय संस्था का तत्काल का समभावित शह से प्रयोगविद्या प्रयोगविद्या में एवं निरीक्षण करते हैं।

प्रधान अनुप्रयोगिक प्रयोगविद्या समीक्षा प्रक्रिया के सार्वजनिक संस्थान के प्रयोगविद्या के उद्देश्यों और कार्यों की उपयुक्तता और प्रयोगविद्या की समीक्षा करेंगे।

इस नीति के अंतिम हेतु स्थानीय भवन के कार्यालयों, नीत राजस्व और प्रयोगविद्या को सुरक्षित किया जाए।

स्थान: हेंद्रायान
दिनांक: 6.9.2011
अध्यक्ष सह प्रथम निरीक्षक
NMDC Limited is engaged in mineral exploration, mining, processing of ores. The core areas are in the iron ore mining and processing at Balladla Iron Ore Mine, Kirandul complex (Deposit-4/IIc) Bacheli complex (Deposit-5, 106/11A) South Bastar Dantewada Dt. Chattisgarh and Donimalai Iron Ore Project; Donimalai; Bellary Dt. Karnataka. NMDC is also operating Diamond Mining Project at Majhagawan, Panna Dt. Madhya Pradesh and Sponge Iron Unit at Falnicha Khammam Dt. Andhra Pradesh. As a pioneer mineral development organization, NMDC is coming up with Integrated Steel Plant at Nagarnar; Bastar Dt. Chattisgarh and other mechanized mining projects such as Kumareswamy Iron Ore Mine; Bellary Dt. Karnataka, Limestone mining at Arki; Solan Dt. Himachal Pradesh, Magnesite Mine with DBM Plant at Panthalb; Reasi Dt. Jammu, J&K, Balladla Iron Ore Project; Deposit-13; Kirandul; South Bastar Dantewada Dt. Chattisgarh and Coal mining at Shahpur Coal blocks; Umaria and Shahdol Districts, Madhya Pradesh and mineral Beneficiation cum Pelletisation Plants at Donimalai in Karnataka and at Bacheli, Kirandul, I/Nagarnar in Chattisgarh.

We shall therefore endeavour to:

- Prevent and control environmental pollution due to mining and associated activities by adopting safe, scientific and environmental friendly methods of mining and mineral processing for applicable legal requirements like forest, environmental and other statutory clearances.
- Maintain the machineries in excellent condition to ensure minimum impact of their operation on environment.
- Conserve the natural resources by ensuring minimum wastage of our product" Iron Ore and Diamond", optimum consumption of electricity, fuel oil, lubricant oil and water.
- Monitor and ensure compliance of all applicable environmental & forest clearance conditions. It shall report to Board of Directors and concerned stakeholders.
- Promote environmental awareness amongst employees, local communities and interested parties through proactive communication and training.
- Continual Environmental performance improvement through framing objectives.
- Management Will review the suitability and effectiveness of environmental objectives and targets through its periodic management review process.

The policy shall be communicated to employees at all levels, local communities and stakeholders for its compliance.

Place: Hyderabad
Date: 6.9.2011

Chairman-cum-Managing Director
नमस्ते,

1. श्रीमान कलेक्टर
   दक्षिण बस्तर
   दंतेवाड़ा।

2. महाप्रबंधक
   जिला उद्योग कंपनी
   दक्षिण बस्तर दंतेवाड़ा।

3. सी.एम.ओ.
   बड़े बंदेली नगर पालिका
   बंदेली, दक्षिण बस्तर

विषयः 4.0 एम.टी.पी.ए. लौह आयस्क प्रसंसीकरण संयंत्र के पर्यावरणीय स्वीकृति के संबंध में।

भारत सरकार, पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, नई दिल्ली के पत्र क्रमांक F.No.J-11015/45/2014-IAII(M) दिनांक 27.04.2017 द्वारा बंदेली, जिला दक्षिण बस्तर दंतेवाड़ा, छत्तीसगढ़ में लौह आयस्क संयंत्र (Iron Ore Beneficiation Plant (4.0 MTPA)) की पर्यावरण स्वीकृति की गई है।

पर्यावरण स्वीकृति की पर्यावरण, वन और परिवर्तन मंत्रालय, भारत सरकार की वेबसाइट http://envfor.nic.in पर देखा जा सकता है।

पर्यावरणीय स्वीकृति की प्रति आपके अवलोकनार्थ सादर प्रस्तुत है।

भवदीय

(श्री. अजीत कुमार)
महाप्रबंधक

पंजीकरण कार्यालयः 10-3-311/ए खंडल मार्ग, मसूब टैंक, हैदराबाद - 500173
Regd. Office: 10-3-311/A Khanij Bhawan, Masab Tank Hyderabad - 500173
सर्वसाधारण को सूचना

एतद् द्वारा सर्वसाधारण को सूचित किया जाता है कि भारत सरकार, पर्यावरण वन और जलवायु परिवर्तन मंत्रालय, नई दिल्ली के पत्र क्रमांक F.No. J-11045/45/2014-IA II (M) दिनांक 27.04.2017 द्वारा बचेली, जिला दक्षिण बस्तर, दन्तेबाड़, छत्तीसगढ़ में लौह अयस्क प्रसंसीकरण संयंत्र (Iron Ore Beneficiation Plant (4.0 MTPA)) को पर्यावरण स्वीकृति जारी की है। पर्यावरण स्वीकृति की प्रतिलिपि छत्तीसगढ़ राज्य पर्यावरण संस्थान मंडल के कार्यालय में उपलब्ध है तथा इसे पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, भारत सरकार की वेबसाइट (http://envfor.nic.in) पर देखा जा सकता है।

वही अजीत कुमार
महाप्रबंधक
एनआरडीजी लिमिटेड
(भारत सरकार का उपकर)
ईकाई राष्ट्रीय पाइप लाइन परियोजना
बेलाडोला भवन, शीतल रोड, पॉ. जगदलपुर, जिला - बस्तर (छ.ग.)
पिन - 494001
CIN - L13100AP1958GOI001674

सर्वसाधारण को सूचना

एतिहासिक विपणन को सुनिश्चित किया जाता है कि भारत सरकार, अयस्क प्रस्तुति, दन और जलवायु परिवर्तन मंत्रालय, नई दिल्ली के भुवन क्रमांक F.No.J-11015/45/2014-IA II (M)दिनांक 27.04.2017 द्वारा बचत, जिला दक्षिण बस्तर, दंडायिका, छत्तीसगढ़ में लोक अयस्क प्रस्तुति कार्यस्थल (Iron Ore Beneficiation Plant (4.0 MTPA)) के प्रयास को स्वीकार की गई है। प्रयास की प्रतिकृति छत्तीसगढ़ राज्य परिवर्तन संस्थान मंडल के कार्यालय में उपलब्ध है तथा इस प्रयास को दन और जलवायु परिवर्तन मंत्रालय, भारत सरकार के वेबसाइट (http://envfor.nic.in) पर देखा जा सकता है।

क्षी अजीत कुमार
महाप्रबंधक
NMDC/SPL/IOPP/EC/303

To,

Additional Principal Chief Conservator of Forests (C),
Ministry of Environment, Forest and Climate Change,
Regional Office (WCZ), Ground Floor, East Wing,
New Secretariat Building Civil Lines,
Nagpur

Sub:Grant of Environmental Clearance w.r.t 4 MTPA Iron Ore Beneficiation Plant reg.

Dated: 19/06/2017

Sir,


The information w.r.t above EC was published in two local News Papers i.e “Bastar Impact” & “Danik Jagran”. A copy of the newspaper advertisement in the above newspapers is enclosed as Annexure-2.

Encl: As above (9 sheets)

Regards

V. Ajit Kumar
General Manager

[Signature]
CHHATTISGARH ENVIRONMENT CONSERVATION BOARD  
Paryavas Bhawan, Sector - 19, Naya Raipur (C.G.) 492002  
Email add - hocecb@gmail.com

No. 3918 /TS/CECB/2017  
To,  
M/s NMDC Limited,  
Bailadila Bhawan, Geedam Road,  
Jagdalpur,  
District - Bastar (C.G.) 494 001

Raipur, dated: 17/10/2017

Sub: Permission to Establish for Proposed Iron Ore Beneficiation Plant - 4.0 Million Tonnes per Annum.


Without prejudice to the powers of this Board under the Water (Prevention and Control of Pollution) Act, 1974, and the Air (Prevention and Control of Pollution) Act, 1981 and without reducing your responsibilities under the said Acts and after going through your proposal for achieving the effluent and gaseous emission standards, it is to inform you that this Board grants you permission to establish for Proposed Iron Ore Beneficiation Plant Capacity - 4.0 Million Tonnes per Annum at Village- Bade Bachel, Tehsil - Bacheli, District - South Bastar Dantewada (C.G.), subject to fulfillment of following terms and conditions.

Terms & Conditions: -

1. All the conditions given in Environmental Clearance issued by Ministry of Environment, Forest & Climate Change, Government of India vide letter no. J-11015/45/2014-IA.II (M), dated: 27/04/2017 shall be strictly complied.

2. Industry shall provide adequate facility for proper treatment of industrial and domestic effluent. Water used for industrial purpose shall be properly treated in a well designed effluent treatment plant of adequate capacity and recycled back in the process. Domestic effluent shall be treated in well-designed sewage treatment plant of adequate capacity. Lean Tailings generated from the process shall be disposed in existing Tailing Dam no. 02, Bachel. All the effluent treatment system shall be kept in good running condition all the time and failure (if any), shall be immediately rectified without delay otherwise, similar alternate arrangement shall be made. In case of any failure of effluent treatment arrangement, it shall be immediately rectified or similar alternate
arrangement shall be provided. Treated effluent shall be utilized in process within plant premises only. Industry shall make arrangement of suitable drains/pipe networks to ensure adequate flow for full utilization of treated effluent inside the premises. No effluent shall be discharged outside of plant premises under any circumstances. Hence zero discharge condition shall be maintained all the time. Industry shall ensure the treated effluent quality within the standards prescribed by Board published in Gazette notification dated 25.03.1988.

3. Industry shall provide adequate measuring arrangements for the measurement of water utilized in different categories and effluent generated.

4. Industry shall install appropriate air pollution control equipments to control the emission of air pollutants at all points of emission (If any). Emission of particulate matter from any point source shall not exceed 50 mg/Nm3 under any circumstances (If any). Chhattisgarh Environment Conservation Board may further stipulate stringent particulate matter emission limit depending upon environmental conditions.

5. Industry shall provide appropriate dust suppression/dust extraction system at all fugitive dust emission sources such as raw materials handling, product and wastes handling section, conveying system, transfer points/junction points, stock house etc. All conveyor belt, all transfer points, all junction points etc. shall be covered to avoid fugitive emission. All internal roads shall be black topped. Good house keeping practices shall be adopted by the industry.

6. The ambient air quality within the factory premises shall not exceed the standards prescribed by Board.

7. Stack height (If any) shall be based on H=14(Q)^0.3 (where Q is emission rate of SO2 in Kg/Hr., and H is Stack height in meters) or as per notification/guidelines of Ministry of Environment, Forest & Climate Change, Government of India/Central Pollution Control Board (whichever is more). The height of stack(s) shall not be less than 30 meter. Adequate arrangement for stack emission monitoring shall be provided with all the stack.

8. Regular monitoring for the measurement of air pollutants level in ambient and emission of air pollutants from stacks (If any) shall be carried out. Industry shall submit stack and ambient air quality monitoring reports to the Board regularly every month.

9. Adequate number of permanent ambient air quality monitoring stations shall be set-up in the down wind direction as well as where maximum ground level concentrations of RPM, (PM10 and PM2.5), NOx, CO and SO2 are anticipated in consultation with the Board. Monitoring network shall be designed taking in to account the land use pattern, location of the stacks, meteorological conditions and topographic features including existing ambient air quality data. Data on ambient air quality and stack emission shall be submitted to the Board every month.
10. Industry shall install separate electric metering arrangements with time totalize for the running of pollution control device(s). These arrangements shall be made in such a fashion that any non-functioning of pollution control device/devices shall immediately stop the electric supply to the production unit/fuel supply/raw materials supply system and shall remain tripped till the pollution control device/devices are made functional again/rectified to achieve the desired efficiency. The record of electric consumption for running the pollution control equipments shall be submitted to Board regularly every month. A separate log - book shall be maintained for this purpose.

11. Industry shall provide safe and scientific arrangement for collection, storage, transportation and disposal of all solid wastes and sludges. Adequate arrangements shall be provided for proper storage, handling etc. of all solid waste generated to avoid any fugitive emission. All solid wastes shall be stored above ground level under covered area for smaller period only.

12. Industry shall provide proper arrangement to control the noise pollution. Industry shall install appropriate noise barriers/control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation to control the noise. The noise level shall not exceed the limit 75 dB(A) during the day time and 70 dB(A) during the night time within the plant premises. Adequate measures shall be taken for control of noise levels below 85 dB(A) in the work environment.


14. Wide green belt of broad leaf local species shall be developed along the plant premises. As far as possible maximum area of open spaces shall be utilized for plantation purposes.

15. Industry shall obtain permission for extraction of ground water from Central Ground Board Authority (As per requirement).

16. Garland drains with appropriate check dams shall be provided all along the raw materials and solid wastes temporary storage area (if any) to avoid any possibility of erosion during rain. Garland drain (size, gradient & length) and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the project site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains. The surface run-off shall be de-silted through a series of check dams and drains. Storm water flowing over plant premises shall not be allowed to join near by nallah or any river. The treated storm water shall be used either in process or for land application.
17. Industry shall adopt rainwater-harvesting technique in the project area and residential area (if any) for recharge of ground water. The rain harvesting technique shall be incorporated right from the design stage of all structures. Industry shall develop rainwater-harvesting structures to harvest the rainwater for utilization in the lean season as well as to recharge the ground water table.

18. Industry shall use fly ash brick, fly ash block and fly ash based products in the construction/repairing activities.

19. Industry shall establish an environmental management cell to carryout function relating to environmental management under the supervision of senior executive who will directly report to the head of organization.

20. Industry shall obtain statutory clearances/licenses/permissions from concerned Central Government/State Government Departments, Boards, Bodies and Corporations etc before start of construction/establishment of the above-mentioned plant. Industry shall follow direction issued by Central Government/State Government, Central Pollution Control Board/Chhattisgarh Environment Conservation Board from time to time regarding control of water & air pollution and for environmental conservation.

21. The issuance of 'consent to establish' of the Board does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Central, State or local laws or regulations.

22. Any change in production capacity, process, raw materials, fuel used etc. shall be intimated to the Board. For any enhancement of the above prior permission of the Board shall be obtained.

23. This permission to establish shall be valid for the period of five years effective from the date of issue of this letter. This permission to establish shall be treated as cancelled in case; no construction activity has been started on the site regarding establishment of the industry during this period. Chhattisgarh Environment Conservation Board reserves the right to extend the validity period / not to extend the validity period/cancel/withdraw the permission to establish of the industry, based on the construction activities carried out on the site regarding establishment of the industry.

24. Board reserves the right to amend/cancel any of the above conditions, stringent the emission/effluent limits stipulated above and add new conditions as and when deemed necessary in the interest of environmental protection, change in the project profile or non-satisfactory implementation of the stipulated conditions etc.

The consent (for operation) as required under the Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981 shall be granted to your industry after fulfillment of all the conditions mentioned above. For this purpose you shall have to make an application to
this Board in the prescribed Performa at least two months before the expected date of commissioning of the plant. The applicant shall not without valid consent (for operation) of the Board bring into use any outlet for the discharge of effluent and particulate matter/gaseous emission.

For & on behalf of
Chhattisgarh Environment Conservation Board

Member Secretary
Chhattisgarh Environment Conservation Board
Naya Raipur (C.G.)

Endt. No. /TS/CECB/2017 Naya Raipur, dated: ___/___/2017
Copy to: -
Regional Officer, Regional Office, Chhattisgarh Environment Conservation Board, Jagdalpur (C.G.). Please ensure compliance and report, if any condition/conditions are violated by the industry.

Member Secretary
Chhattisgarh Environment Conservation Board
Naya Raipur (C.G.)