## Government of Maharashtra

SEAC-2012/CR-177/TC2
Environment department
Room No. 217, 2nd floor,
Mantralaya Annexe,
Mumbai- 400 032.
Dated: 21st January, 2014

To,
M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd
Shahajinagar, Post- Redni,
Tal. Indapur, Dist.-Pune- 4131114

**Subject: Environmental clearance for proposed 18 MW Bagasse based Co-generation power plant at Nira Bhima Sahakari Sakhar Karkhana Ltd. Shahajinagar, Post-Redni, Tal. Indapur, Dist. Pune by M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd**

Sir,

This has reference to your communication on the above mentioned subject. The proposal was considered as per the EIA Notification, 2006, by the State Level Expert Appraisal Committee-I, Maharashtra in its 72nd meeting and decided to recommend the project for prior environmental clearance to SEIAA. Information submitted by you has been considered by State Level Environment Impact Assessment Authority in its 63rd Meeting.

2. It is noted that the proposal is for grant of Environmental Clearance Proposed 18 MW Bagasse based Co-generation power plant at Nira Bhima Sahakari Sakhar Karkhana Ltd., Shahajinagar, Post-Redni,Tal. Indapur, Dist. Pune. SEAC considered the project under screening category 1 (d). B1 of EIA Notification 2006.

**Brief Information of the project submitted by Project Proponent is as:**

| | |
|---|---|
| **Name of Project** | 18 MW Bagasse Based Co-generation Power Plant by Nira Bhima Sahakari Sakhar Karkhana Ltd. (NBSSKL) |
| **Project Proponent** | M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd. (NBSSKL) |
| **Consultant** | MITCON Consultancy & Engineering Services Ltd. |
| **New Project** | New Project |
| **Area Details** | Total plot area (Acre.): 100<br>Built up area (Acre.): 11 |
| **Estimated capital cost of the Project (including cost for land, building, plant and machinery separately)** | |

| Total Project Cost | Cogen Power (Rs. in Lakh) |
|---|---|
| Land & Site Development | 12.00 |
| Civil works & Buildings | 482.82 |
| Indigenous Plant and Machinery | 6780.62 |
| Preliminary & Pre-Op.Expenses | 571.35 |
| Contingencies | 19.19 |
| Margin Money | 40 |

| | | | |
|---|---|---|---|
| | Miscellaneous Fixed Assests | 120 | |
| | Power Evacuation arrangement | 740.80 | |
| | Supervision Charges for Synchronizing | 14.92 | |
| | Total | 8781.7 | |

| | |
|---|---|
| Location details of the project : | Latitude : 17°59'29.94"N<br>Longitude : 74°56'42.45"E<br>Location : Gut No. 340,341,344,345,346,347,348 Shahajinagar, Post- Redni, Tal. Indapur, Dist.-Pune, Pin-4131114<br>Elevation above Mean Sea Level: 525 meter |
| Distance from Protected Areas | There are no Protected areas / Critically polluted areas / Eco-Sensitive areas/ inter-state boundaries within 10 Km radial area |

**Raw materials (including process chemicals, catalysts, & additives).**

| List of raw materials to be used | *Physical and chemical nature of raw material | *Quantity (tonnes/ year) full production capacity | Source of materials | Means of transportation (Source to storage site) with justification |
|---|---|---|---|---|
| Bagasse | Fibrous material | Season (160 days) : 152564MT<br>Off-season (69 Days): 32493 MT | Existing Sugar Factory (NBSSKL) | By conveyor belt with enclosed sheet & pipelines |
| Biogas | Gas | Season :1.475 TPH<br>Off-season :1.475 TPH | | |

**Production details**

| Name of Products. By products and Intermediate Products | | Existing (T/Year) | Proposed activity (new/ modernization/ expansion) (T/Year) | Total (T/Year) |
|---|---|---|---|---|
| Main Products: (Power) | Season (160 Days) | 0 | 18 MW | 18MW |
| | Off-Season (69Days) | 0 | 12 MW | 12 MW |
| By-Products Intermediate Products: Ash | Season (160 Days) | 0 | 3051 MT | 3051 MT |
| | Off- Season (69 Days) | 0 | 650 MT | 650 MT |

| | |
|---|---|
| Process details / manufacturing details | In power generation scheme, chemical energy of fuel is first converted into thermal energy (during combustion), which is then converted into mechanical energy (through a turbine) and finally into electrical energy (through a generator). |
| Rain Water Harvesting (RWH) | In the factory premises roof top area will be determined and subsequently rain water harvesting potential will be calculated. However detailed design and engineering of the RWH system will be undertaken during implementation stage. |
| Total Water Requirement | Total water requirement:<br>Fresh water (CMD) : Season (160 Days) :893<br>Off- Season (69 Days) : 1009 |

& Source: Bhima River

Use of the water:

| Particulars | Season (CMD) | Off-Season (CMD) |
|---|---|---|
| Process | 30 | 25 |
| Cooling water | 464 | 690 |
| DM Water | 398 | 293 |
| Dust Suppression | 60* | 61* |
| Drinking | 1 | 1 |
| Green belt | 86* | 80 |
| Fire service | 13 | 13 |
| Others | 2 | 1 |

*Treated water reused .

| | |
|---|---|
| **Storm water drainage** | Proper storm water drainage line will be provided to maintain the natural flow of storm water |
| **Sewage generation and treatment** | Amount of sewage generation (CMD) :3<br>Proposed treatment for the sewage : Septic tanks followed by Soak Pi<br>Capacity of the STP (CMD) (If applicable): NA. all sewage will be treated in ETP |
| **Effluent characteristic** | All the effluent characteristic will be prescribed as per MPCB, Norm |
| **ETP details** | Existing ETP having capacity 700 $m^3$/day. NBSSKL has already modernized existing ETP. |
| **Disposal of the ETP sludge (If applicable)** | After treatment in ETP generated sludge will be used for gardening purpose |

**Solid waste Management**

| Sr. No | Source | Qty (TPM) | Form (Sludge / Dry / Slurry etc.) | Composition |
|---|---|---|---|---|
| 1. | Raw water treatment plant | -- | -- | -- |
| 2. | ETP | 8 MT (18 MW season operation-160days and 3MT (12 MW off season operation) | Sludge | --- |
| 3. | Process | Ash-3051MT (18 MW season operation-160days and 650MT (12 MW off season operation) | Dry | potash |
| 4. | Spent Catalyst | -- | -- | -- |

| | | | | | |
|---|---|---|---|---|---|
| | 5. | Oily Sludge | -- | -- | -- |
| | 6. | Others like Battery waste, e waste etc (Pl. Specify) | -- | -- | -- |

**Atmospheric Emissions (Flue gas characteristics SPM, $SO_2$, $NO_X$, CO, etc.)**

| Sr. No. | Pollutant | Source of Emission | Emission rate (kg/hr) | Concentration in flue gas (g/sec) |
|---|---|---|---|---|
| 1 | SPM | Stack | 0.477 | 3.1 |
| 2 | $SO_2$ | Stack | 39.73 | 11 |
| 3 | $NO_X$ | Stack | Concentration in flue gas will be 100 mg/Nm$^3$ | |
| 4 | CO | Stack | NA | NA |

**Stack emission Details:**

| Plant Section & units | Stack No. | Height from ground level (m) | Internal Diameter (Top)(m) | Emission Rate (kg /hr) | Temp. of Exhaust Gases ($^0$C) |
|---|---|---|---|---|---|
| 66 TPH Boiler | 1st | 75 | 3.6 | 0.29 | 150 |
| 40 TPH Boiler | 2nd | 60 | 3.5 | 11.16 | |

**Emission Standard** — As per CPCB, MPCB Norms

**Ambient Air Quality Data**

| Pollutant | Permissible Standard µg/m$^3$ | Proposed/ Resultant Concentration (in µg/m$^3$) | Remarks |
|---|---|---|---|
| $PM_{10}$ | 100 | 27.22 | Due to proposed activity there is increase in pollution activity it will be mitigate by providing pollution control equipments such as ESP & dust suppression method & by developing green belt around the factory and within the premises |
| $SO_2$ | 80 | 31.9 | |
| $NO_X$ | 80 | 29.3 | |

**Details of Fuel to be used:**

| Fuel | Daily Consumption (TPD/KLD) | | Calorific value (Kcals /kg) | % Ash | % Sulphur |
|---|---|---|---|---|---|
| | Existing | Proposed | | | |
| Bagasse | | Season:954 Off-Season: 471 | 2250 | 2 | 0.05 |

Source of fuel: Existing Sugar Unit having capacity 2500-3500 TCD
Mode of transportation of fuel to site: Conveyor Belts

**Energy**

Power supply:
Existing power requirement: } Season : 6027 KW
Proposed power requirement: } Off-Season : 1639 KW
DG sets:
Number and capacity DG sets to be used (existing and proposed)
Details of the non-conventional renewable energy proposed to be used : Yes
Bagasse will be used : Season (160 Days) – 152564 MT
Off-Season (69 Days) - 32493MT

Biogas : Season (160 Days) – 1.475 TPH
Off-Season (69 Days) – 1.475 TPH

**Green Belt Development**

Green belt area (Acre.): 20 Existing + 12 Proposed
Number and species of trees to be planted : 6000

**Details of Pollution Control Systems:**

| Sr. No. | | Existing pollution control system | Proposed to be installed |
|---|---|---|---|
| 1 | Air | -- | ESP |
| 2 | Water | -- | ETP |
| 3 | Noise | -- | Acoustic Enclosures will be provided |
| 4 | Solid Waste | -- | It will be used in bio-composting |

**Environmental Management plan Budgetary Allocation**

Capital cost (With break up): 280 Lakhs
O&M cost (With break up): 39 Lakhs

| Sr. No. | Name of Activity | Capital Cost (Rs.Lakhs) | Recurring Cost (Rs. Lakhs) |
|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| | 1 | Air Pollution Control System | 200.00 | 12.00 |
| | 2 | Water pollution control systems (E.T.P) | --- | 15 |
| | 5 | Noise pollution control | 20.00 | 2.00 |
| | 6 | Green Belt Development/ Maintenances | 25.00 | 2.50 |
| | 7 | Environmental monitoring / Environmental Management | 25.00 | 5.00 |
| | 8 | Occupational health & safety | 10.00 | 5.00 |
| | TOTAL | | 280.00 | 29.0 |

3. The proposal has been considered by SEIAA in its 63rd meeting decided to accord environmental clearance to the said project under the provisions of Environment Impact Assessment Notification, 2006 subject to implementation of the following terms and conditions :

(i) No additional land shall be used /acquired for any activity of the project without obtaining proper permission.

(ii) For controlling fugitive natural dust, regular sprinkling of water & wind shields at appropriate distances in vulnerable areas of the plant shall be ensured.

(iii) Regular monitoring of the air quality, including SPM & SO2 levels both in work zone and ambient air shall be carried out in and around the power plant and records shall be maintained. The location of monitoring stations and frequency of monitoring shall be decided in consultation with Maharashtra Pollution Control Board (MPCB) & submit report accordingly to MPCB.

(iv) Necessary arrangement shall be made to adequate safety and ventilation arrangement in furnace area.

(v) Proper Housekeeping programmes shall be implemented.

(vi) In the event of the failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieve.

(vii) A stack of adequate height based on DG set capacity shall be provided for control and dispersion of pollutant from DG set.(If applicable)

(viii) A detailed scheme for rainwater harvesting shall be prepared and implemented to recharge ground water.

(ix) Arrangement shall be made that effluent and storm water does not get mixed.

(x) Periodic monitoring of ground water shall be undertaken and results analyzed to ascertain any change in the quality of water. Results shall be regularly submitted to the Maharashtra Pollution Control Board.

(xi) Leq of Noise level shall be maintained as per standards. For people working in the high noise area, requisite personal protective equipment like earplugs etc. shall be provided.

(xii) The overall noise levels in and around the plant are shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures, etc. on all sources of noise generation. The ambient noise levels shall confirm to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989.

(xiii) Green belt shall be developed & maintained around the plant periphery. Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Dept.

(xiv) Adequate safety measures shall be provided to limit the risk zone within the plant boundary, in case of an accident. Leak detection devices shall also be installed at strategic places for early detection and warning.

(xv) Occupational health surveillance of the workers shall be done on a regular basis and record maintained as per Factories Act.

(xvi) The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.

(xvii) The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Waste (Management and Handling) Rules, 2003 (amended). Authorization from the MPCB shall be obtained for collections/treatment/storage/disposal of hazardous wastes.

(xviii) The company shall undertake following Waste Minimization Measures :

- Metering of quantities of active ingredients to minimize waste.
- Reuse of by- products from the process as raw materials or as raw material substitutes in other process.
- Maximizing Recoveries.
- Use of automated material transfer system to minimize spillage.

(xix) Regular mock drills for the on-site emergency management plan shall be carried out. Implementation of changes / improvements required, if any, in the on-site management plan shall be ensured.

(xx) A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.

(xxi) Transportation of ash will be through closed containers and all measures should be taken to prevent spilling of the ash.

(xxii) Separate silos will be provided for collecting and storing bottom ash and fly ash.

(xxiii) Separate funds shall be allocated for implementation of environmental protection measures/EMP along with item-wise breaks-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should reported to the MPCB & this department

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(xxiv) The project management shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the Maharashtra Pollution Control Board and may also be seen at Website at http://ec.maharashtra.gov.in

(xxv) Project management should submit half yearly compliance reports in respect of the stipulated prior environment clearance terms and conditions in hard & soft copies to the MPCB & this department, on 1st June & 1st December of each calendar year.

(xxvi) A copy of the clearance letter shall be sent by proponent to the concerned Municipal Corporation and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.

(xxvii) The proponent shall upload the status of compliance of the stipulated EC 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 MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, $SO_2$, NOx (ambient levels as well as stack emissions) or critical sectoral

parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

(xxviii) Six monthly monitoring reports should be submitted to the Regional office MoEF, Bhopal with copy to this department and MPCB.

(xxix) The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.

(xxx) The environmental clearance is being issued without prejudice to the court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him.

4. The environmental clearance is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision under EP Act or of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him, if any or action initiated under EP Act.

5. The Environment department reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.

6. **Validity of Environment Clearance:** The environmental clearance accorded shall be valid for a period of 5 years to start of production operations.

7. In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.

8. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution ) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling ) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.

9. Any appeal against this environmental clearance shall lie with the National Green Tribunal , Van Vigyan Bhawan, Sec- 5, R.K. Puram, New Dehli – 110 022, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010

(R.A. Rajeev)
Principal Secretary,
Environment department &
MS, SEIAA

Copy to:

1. Shri. R. C. Joshi, IAS (Retd.), Chairman, SEIAA, Flat No. 26, Belvedere, Bhulabhai desai road, Breach candy, Mumbai- 400026.

2. Shri. Dr. S. Devotta, Chairman, SEAC, T2/302 Sky City, Vanagaram –Ambattur Road, Chennai –600 095

3. Member Secretary, Maharashtra Pollution Control Board, with request to display a copy of the clearance.

4. The CCF, Regional Office, Ministry of Environment and Forest (Regional Office, Western Region, Kendriya Paryavaran Bhavan, Link Road No- 3, E-5, Ravi-Shankar Nagar, Bhopal- 462 016), (MP).

5. Regional Office, MPCB, Pune.

6. Commissioner, Pune Municipal Corporation, Pune.

7. Collector, Pune.

8. IA- Division, Monitoring Cell, MoEF, Paryavaran Bhavan, CGO Complex, Lodhi Road, New Delhi-110003.

9. Director (TC-1), Dy. Secretary (TC-2), Scientist-1, Environment department.

10. Select file (TC-3).

(EC Uploaded on - 22.09.14)