CHAPTER – XI
SUMMARY & CONCLUSION

11.0 INTRODUCTION

M/s North East Roofing Pvt. Ltd. is an existing plant manufacturing 50,000 TPA of Asbestos Cement Sheets and its Accessories at Bonda Industrial Estate, Bonda Village No.1, Narangi, Panikheti GP, Chandrapur –C D Block, Kamrup District, Assam State. The existing plant is having Environmental Clearance vide letter no. J-11011/332/2006-IA-II (I) (T) dated 5th July 2007. Now as a part of expansion, company proposed to expand the capacity of manufacturing of Asbestos Cement Sheets and Accessories from 50,000 TPA to 70,000 TPA in the existing plant premises.

Total land in possession of management for the proposed project is 8,765.799 Sq. M. The total capital investment envisaged for the proposed expansion project is Rs. 4.5 Crores. As per the EIA notification dated 14th September 2006, the proposed project fall in Category - A project.

Asbestos Cement Corrugated Sheet Plant is based on fully automated closed system by adopting “Hatschek Process (Wet System)” which is more commercially viable and is currently in use in the majority of the Asbestos Cement Corrugated Sheet plants in India. This process is adopted in many countries and it is proposed to introduce the same process with latest development in the technology and machines.

The raw materials used for the manufacture of AC sheets are:

- Asbestos fibre (Chrysotile)
- Cellulose pulp / wood pulp
- Cement
- Fly ash
## 11.1 DETAILS ABOUT THE PROJECT

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| 8. | **Solid waste disposal** | • Entire solid waste generated including process, sheet cuttings, rejects, dust from bag filters will be recycled and reused in the manufacturing process.  
• The cut and damaged fibre bags will be immediately repaired with adhesive tape to ensure no spillages.  
• The empty bags of the fibre are shredded to convert in fine particles and are used in the process along with raw material. |
| 9. | **Green belt development** | • Local DFO will be consulted in developing the green belt. |
11.2 BRIEF DESCRIPTION OF PROCESS

The manufacturing process of fiber cement product is based on classical wet Hatschek process where in the Chrysotile Asbestos Fiber and Pulp is mixed with Portland cement and Fly ash in aqueous condition.

A blend of Asbestos Fiber of different grades is wet ground in Edge Runner Mill and then fed to a Hydro Disintegrator where approximately 35 times (of weight of fiber) of water is fed. In the wet opener the fiber slurry is further opened by continuous churning. Fiber slurry is then fed to a mixer. Also fed to the mixer are the required quantities of fly ash (after converting it into slurry form) and wood/cotton pulp. Fixed quantity of cement is sent to mixer where all raw materials are continuously agitated.

The raw material slurry is fed to sheeting machine, which consists of 5 / 6 vats with rotating sieve cylinders and an endless felt moving over the sieves tangentially. In brief, the asbestos cement film is transferred to cylinder from slurry in vats which in turn is transferred to felt. From felt, Asbestos cement (A.C.) film is transferred and accumulated in a rotating drum. At different points in the felt suction line is provided which dewater the asbestos cement film. As soon as the desired thickness is achieved, it is automatically cut off from the drum. Plain sheet thus formed is taken to atmospheric corrugators where each sheet is, after corrugation, kept sandwiched between two steel templates. These sheets after 10-12 hours are stripped from the templates. Templates are segregated and recycled while cement sheets are taken to maturing bay where it is kept under humid environment for about 21 days. Sheets are then tested / inspected before releasing into the market.

11.3 ENVIRONMENTAL MANAGEMENT PLAN

AIR EMISSION CONTROL

All the laws, regulations and norms regarding use and handling of asbestos are being followed strictly and same will be continued after enhancement also. The asbestos dust generation is likely at the following operations:
• During the cutting of pressure packed asbestos bags either manually or mechanically.
• While feeding the opened asbestos fibre bags to the charger of the mill.
• While milling the fibre.

To control the dust during the cutting process the charger is enclosed from all sides with front access. The shutter is provided at the entry point so that shutter closes after bag enters closed chamber. The following measures are being implemented for air emission control and same will be followed after enhancement also.

1. The bag opening device and Edge mill is connected with Dust Extraction system provided with Bagfilter with Auto Cleaning system. The air comes out from filter bags is connected to Air Wet washer & finally let out through chimney of Adequate Height. The out let dust emission will be less than 0.2 fibre /cc.

2. Dust Collection with bag filters & Auto cleaning system is already been provided at Fibre, Cement & Fly ash feeding sections which are sufficient after Expansion also.

3. Bags containing asbestos fibre are stored in enclosed area to avoid fugitive emission of asbestos fibre from damaged bags, if any and the similar practice will be continued after expansion also.

All the norms of MOEF / CPCB will be strictly followed during operation of the plant.

**During the operation phase of the plant, fugitive dust emissions will be controlled to the extent possible by the following methods:**

- All the internal roads are made Pucca.
- Regular water sprinkler will be done on the roads. Unpaved areas in the plant will be covered by grass.
- Water sprays are installed at transfer points to suppress dust due to transport of material
- Extensive greenbelt has already taken up all around the plant area to further reduce the emissions.

**WASTEWATER MANAGEMENT**

- No process water will be discharged outside the premises, as the entire process effluent will be reused / recycled in the manufacturing process as per CPCB norms in the existing
plant. And the similar practice will be done after enhancement also. Zero effluent discharge is being adopted.

**NOISE POLLUTION**

The major noise levels will be confined to the working zones of the plant. Ear plugs will be provided to all employees who will enter into the noise prone areas.

**SOLID WASTE**

- Entire solid waste generated including process, sheet cuttings, rejects, dust from bag filters will be recycled and reused in the manufacturing process.
- The cut and damaged fibre bags are being & will be immediately repaired with adhesive tape to ensure no spillages.
- The empty bags of the fibre are shredded to convert in fine particles and are used in the process along with raw material.

Hence there will not be any adverse impact on land environment due to the solid waste generation from the proposed capacity enhancement.

11.4 **CONCLUSION**

Management of North East Roofing Pvt. Ltd. is being supporting and will extend its support to the local areas that will be benefited by way of generation of employment opportunities, increased demand for local products and services. There will be an overall improvement in the income level of the local people.

The project will create direct / indirect employment during erection and operation of the proposed expansion project. With the development of this plant there will be lot of scope for more industrial investments which in turn will benefit the nation.