

Environmental Impact Assessment Report

Jiangxi Tianren Ecology Co., Ltd
Capacity Expansion Project for fungus-based bio-pesticides (1800 tons per year) and
preparations (4000 tons per year)

Environmental impact analysis and assessment is prepared by:

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1. Compliance with Industrial Policy and Municipal Planning

The project is under the “encouraged category” of the <Industrial Restructuring Catalog> and is located at the Jingangshan’s Economic and Technological Development Zone in Jiangxi Province. The High-Technological Industry Development Zone consists mainly of bioengineering, pharmaceutical, opto-mechatronics, environmental protection and new energy industries etc.

The project is in line with local development planning.

2. Current Environmental Quality

2.1 Current Air Quality

In the monitored area, all single monitoring factor index, including TSP, PM10, SO2 and NO2, are less than 1, indicating a good air quality in the region and a compliance with the requirements of (GB3095-1996).

2.2 Current Surface Water Quality

According to the water quality monitor report for the Gan River, all the monitor index are in line with (GB3838-2002), and the compliance rate is 100%, indicating a good surface waters quality in the vicinity of the project site.

2.3 Current Noise Quality

According to the noise monitor report, all the monitored spots in the vicinity of the plant meet the environment quality standards for noise (GB3096-2008) during both the daytime and night hours.

3. Project Analysis

3.1 Overview of the project

The total investment of the project is 288.48 million yuan. It is estimated that the overall

production scale of fungus-based bio-pesticides will reach an annual output of 1,800 tons together with 4,000 tons preparations. The project covers an area of 68,000m² with 300 working days per year and three shifts per day.

3.2 Pollutant Emission

3.2.1 Exhaust Emissions Analysis

The main source of the air pollution is flue gas, which produces 0.36t of flue dust annually, and dust-laden exhaust gas from medical formation additives production, which produces 0.92t of dust annually.

3.2.2 Wastewater Analysis

Industrial wastewater includes the water from drying process of condensers and cleaning water for the equipment and the site's ground. The wastewater is treated in the wastewater treatment station at the site and then further treated in the reclaimed water station, with the good reclaimed water being used for watering plants and toilet flushing etc.

Domestic sewage is treated in the septic tank before goes to reclaimed water station. The final good reclaimed water is used for watering plans and toilet flushing etc.

3.3 Solid Waste Analysis

Solid waste incorporates rise husk ash residues and domestic garbage.

3.4 Noise Pollution Analysis

Noise pollution is mainly mechanical noise coming from air compressors, induced fan, blower fan and shredding machines etc.

4. Environmental Impact Evaluation

4.1 Atmospheric Environmental Impact Evaluation

The normal scenario of PM₁₀ Emissions, forecasted with our valuation model, indicates that the final exhaust gas of the project, if treated properly beforehand, will have minimal impact on the environment.

4.2 Surface Water Impact Evaluation

Due to the fact that the wastewater of the project is being processed and recycled for the site's usage, including toilet flushing and watering plants, the impact on the surface water is minor.

4.3 Noise Impact Evaluation

According to the noise superposition simulation, the noise pollution at the site during daytime falls in the range between 42.69-56.92dB (A) and at night between 39.58-48.09dB (A), both in line with the standards of noise pollution.

After launch, the impact of the noise on the environment is minimal.

4.4 Solid Waste Impact Evaluation

All the solid wastes of this project is carefully treated and shall have minimal impact on the environment.

5. Environmental Management Measures

5.1 Exhaust Gas Control Measures

The project uses bag filters to treat flue-gas. The filtered flue gas has a 20mg/m³ pollutant density and has to go through a 35-meter stack before finally emitted to the air, which is in line with the requirements of the <Air Pollutants Emission Standards> (GB13271-2001).

Gas exhaust from the production process of pesticides and preparations is processed using a bag-collector and channeled through a 15-meter-high flue-gas stack. The dust in the gas exhaust meets the density and velocity requirements of the <Air Pollutants Emission Standards> (GB16297-1996).

Emission control measures are feasible.

5.2 Wastewater Treatment Measures

Industrial wastewater includes the water from drying process of condensers and cleaning water for the equipment and the site's ground. They are treated in the wastewater treatment station at the site and then further treated in the reclaimed water station to meet the requirements of the <Urban Sewage Recycling City Miscellaneous Water> (GB18920-2002), with the good reclaimed water being used for watering plants and toilet flushing etc.

Domestic sewage is treated in the septic tank before goes to reclaimed water station. The final good reclaimed water, which meets the requirements of the <Urban Sewage Recycling City Miscellaneous Water> (GB/T18920-2002), is used for watering plans and toilet flushing etc.

Wastewater treatment measures are feasible.

5.3 Solid Waste Management Measures

Rise husk ash residues, generated from the process of incineration, are under class 1 of

the general industrial solid waste, which are used as fertilizers. Scraped products are burned with rice husks. Domestic garbage are dealt by the Municipal Solid Waste Department.

All solid wastes are properly disposed and the measures are manageable.

5.4 Noise Control Measures

Low-noise equipment is selected for this project and buildings, structural materials and plants are used to diminish the propagation of sounds. The result meets the requirements for the <Standards of Ambient Noise of Industrial Enterprises> (GB12348-2008).

Noise control measures are manageable.

6. Cleaner Production

The project follows the concept of cleaner production by adopting clean raw materials and advanced clean production technologies and equipment to reduce energy/material consumption. Its cleaner production thus meets the national standards.

7. Economic Benefits of the Environment

The project has good economic and social benefits. In addition, having adopted various environmental protection measures, the project is able to vastly reduce its pollutants and its emissions meet relevant standards. Therefore it also has certain environmental benefits.

8. Public Participation

The project received full support from the public who raised no objection as they believe it would have a significant contribution to the local community. The residents are watching closely at the environmental measures adopted in this project and are wary of any potential adverse impacts the project may entail.

9. Ceiling Control

The project's COD_{Cr}, SO₂ emissions are under the ceiling set by the Environmental Protection Agency of Ji'an City.

10. Conclusion

This project complies with all industrial policies and the planning of the Economic and Technological Development Zone. When in operation, all pollutants will meet the emission and discharge standards and ceiling requirements. The impact of such pollutants is acceptable. Therefore, this project appears to be environmentally feasible.