

Odor Control

CP Feed Mill, Thailand

Background

Charoen Pokhand Group (CP) is a publicly listed company and the largest agricultural products supplier in Thailand with operations in many south east asian countries.

CP have a stock feed mill located at Pranakorn Sri Ayuttaya, Bangkok, that produces stock feed pellets for the Thai market. The production process is a wet mixing of various ingredients including fish meal, which is then pelletised and dried.

The drying process releases a wide range of volatile organic odors including mercaptans, amines, ammonia, hydrogen sulphide. These emissions were the cause of constant complaint and in the wet season, complaints were received from up to 12 miles (20km) bordering the Bangkok CBD.



CP Feed Mill Site

Challenges

Due to the size of the plant and volume of drying air, the main exhaust stack, which is 18 inches (3m) high, 35 inches (900mm) in diameter, has an output of 8.5×10^4 cu ft (24,000m³) per hour, at a maximum temperature of 149°F (65°C), making odor control in this air stream problematic.

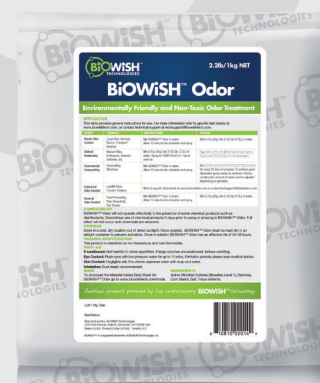


BiOWiSH™ Odor Benefits

- Eliminates odors (does not mask them)
- Effective on a wide range of volatile organic compounds (VOCs)
- Fast acting
- Cost effective
- Operative at low dosage rates
- Long residual effective period
- 100% natural and non-toxic
- Safe for humans and the environment

Available Sizes

- 100g/3.5oz
- 1kg/2.2lb



BiOWiSH™ Odor Application

BiOWiSH™ Odor has been applied via a 1,000psi, low volume misting system into the stack.

BiOWiSH™ Odor was mixed into solution and applied at 7oz (200gm) into a 53Gal (200L) reservoir (1,000ppm). The solution was then delivered via 8 nozzles in spiral formation along the stack at 1.3 Gal (5L) of solution per nozzle per hour. The usage of *BiOWiSH™ Odor* is 1.75oz (50gm) per hour.



Installation of Nozzles



Pump Unit

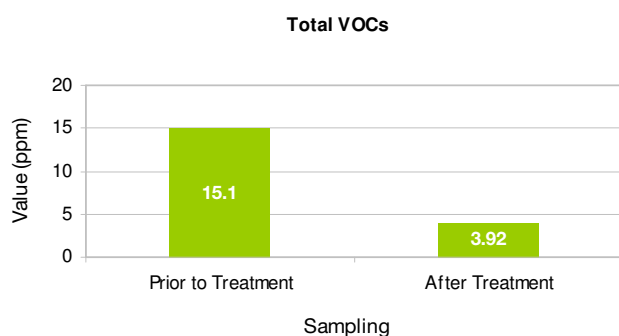


Pump Unit and Reservoir

Results

Independent sampling by SGS was taken on the 3rd of April 2008, prior to application of *BiOWiSH™ Odor*. Following 10 minutes of application further sampling was taken.

Volatile Organic Compounds as measured during the sampling was as follows:



About BiOWiSH™ Odor

The result of over 18 years of research and development, BiOWiSH™ is a powerful blend of biocatalysts that breaks down complex organic molecules to help eliminate waste, reduce odors, improve soil fertility and enhance water quality, among other uses. 100% natural and non-toxic, BiOWiSH™ is safe for everyday use in a wide range of consumer and industrial products. It has been proven to solve problems in environmental management (including wastewater, solid waste, soil and water remediation and industrial emissions), as well as agriculture. BiOWiSH™ products are used extensively and available in Asia, Australia, Europe, North America and Latin America.

Developed specially for Industrial Air Emission applications, *BiOWiSH™ Odor* controls odor and emissions from any organic source including ammonia, hydrogen sulphide, amines, mercaptans and a wide range of volatile organic compounds (VOC). *BiOWiSH™ Odor* has a dual action (gaseous and substrate) and begins working immediately upon contact with the substrate.

Contacts

BiOWiSH Technologies

Tel: +1 312 572 6709

Email: animalag@biowishtech.com