*Note: This is an unofficial translation of the* [*original article in Chinese*](http://yj.southcn.com/content/2015-10/19/content_135051323.htm)*.*

(Guangdong province) The city of Yangchun initiated a household garbage treatment project with Conch Cement in Chunwan town, aiming to fundamentally break the “garbage siege”. The project was commissioned in early September.

**Current status: garbage siege needs to be broken**

The project was implemented by Yangchun Conch Cement Company and was designed to undertake safe treatment of household garbage from the northern part of the city.

The project passed the social risk evaluation in September 2014 in accordance with relevant national regulations and acquired the Guangdong Record-filing Certificate for Business Investment; prior to the issuance of the certificate, the project had gone through relevant procedures including project planning, application to use of land, and social risk evaluation. “Yangchun Household Garbage Co-processing in Cement Kiln Project has acquired its ‘birth certificate’ with the approval and recognition of the competent government institutions”, an official from the relevant government agency told the reporter in an interview.

**Technology: a complete disposal of garbage**

Using cement kilns to dispose of municipal solid waste has been applied in Germany, Japan, Britain, France and the United States for more than 30 years. The project uses the co-processing technology jointly developed by Conch Cement and KawasakiHeavy Industries, Ltd. (KHI) and is owned by Conch Cement as an independent intellectual property right.

The project manager explained that, as the disposal process is controlled by computers, it operates in a sealed and negative pressure environment leaving no room for the odour produced from the garbage to be discharged outside.  
  
The advantages of the technology are as follows: first, the problem of odour emission from waste incineration is solved. Second, the garbage liquid is stored and pumped to the gasifier for oxidation in a fixed amount periodically to achieve safe treatment. Slag is recycled for use in cement kilns, and through calcination, the loose ashes and heavy metal waste incorporates into the crystalline lattice of the cement clinker for solidification, preventing secondary pollution.

As for the toxic gases generated from garbage disposal, which is the issue that most concerns the public, Xiao Kehua explained that high temperature and alkaline environment can effectively reduce the formation and discharge of dioxin. Through gasifier and decomposing furnace, the exhaust gases will meet the country’s emission standards for air pollutants. Wu Zhaolin, deputy general manager of Conch Cement Company Ltd., added that the most noteworthy feature of the technology is zero discharge. Liquid waste, soot and waste slag are transported into the kiln and combusted completely while producing cement.

**Advantage: overcome the disadvantages in traditional waste disposal**

According to Liu Chengmin, deputy director of Yangchun Environmental Protection Bureau, dioxin from garbage incineration is the major concern for the public. Despite its complex composition, dioxin decomposes at a temperature above 850°C. The advantage of a cement kiln is that it is equipped with a decomposition furnace in which dioxin decomposes at high temperatures ranging from 800 to 900°C and is turned into non-toxic substance and later treated by neutralization with alkaline substances to inhibit its second generation.

“The biggest social benefit of the project is the removal of garbage siege. After the construction is completed, the garbage co-processing facilities can save five football fields of landfill space each year as well as 24,000 tons of coal.’

Answering the question raised by the public whether garbage from other parts of the city will be transferred to Chunwan town for disposal, an official with Chunwan town government expressed that the project is capable of treating 200 tons of garbage a day. Chunwan town generates about 60 tons of waste a day, and the garbage generated by six other towns in the northern part of Yangchun city overflows the treatment capacity. Considering transportation cost, the waste from Chanwan town will be disposed first, followed by those from nearby towns. Garbage from the southern part of Yangchun city and other counties and districts will not be processed in the plant.

**Supervision: 24-hour online monitor by provincial competent authority**

Officials from the environmental protection department noted that the cement plant has installed a full equipment set; it is nearly impossible for the plant to illegally discharge exhaust gases through standardized vent holes. Moreover, the project is under the supervision of the provincial environmental protection department, which monitors the emission discharge 24-hour online. The environmental protection authorities of Yangjiang City (prefecture level) and Yangchun City (county level) will also carry out regular inspection of the facilities.