

Inner Mongolia Water Project

General Introduction

February, 2010

Project Location: Bayannur, Inner Mongolia, China

Project Partnership: Global Health and Education Foundation

Chinese Academy of Science

Local government

Background

Global Health and Education Foundation (GHEF) and Chinese Academy of Sciences (CAS) initiated Safe Drinking Water Program in rural areas of China in year 2006, to address the fluoride and arsenic contamination problem in drinking water sources. The pilot project was completed in Shanxi province in September of 2007.

Recently CAS has developed two new technologies for arsenic and fluoride removal, and the two parties agree to extend the cooperation, to prevent waterborne disease, and improve the health and well-being of individuals globally with the new technologies available.

After a site investigation and water analysis carried out by the joint effort from CAS and GHEF, we chose 2 villages in Inner Mongolia that are suffering from severe problems of arsenic and fluoride contamination as the location for our project.



General introduction of project execution plan

With existing water pumping station and distribution pipe lines to each household, the parties will add water treatment system into the existing pumping system. The source water will be lifted and go through our system eliminating arsenic or fluoride, and then to be distributed to each household.

Since the village people are paying the running cost of their existing water pumping system, the extra operational cost will be also shared by the villagers.

* The extra operational cost brought by our system will be 10 RMB per household per year.



Water pumping station

About the two benefited villages

Village	Population	Problem	Project target level	After-treatment water quality analysis
You Yi	64 households, 260 population	Arsenic contamination, 0.12 mg/l	Arsenic: 0.05 mg/l	Arsenic: 0.02 mg/l
Huang Tu Dang	120 households, 400 population	Fluoride contamination, 1.3mg/l	Fluoride: 1.0 mg/l	Fluoride: 0.5 mg/l

Water treatment technology

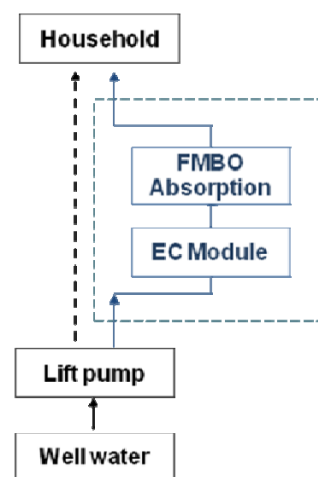
Technologies. The project will apply the two innovated technologies by CAS to remove the arsenic and fluoride from underground water. They are:

1. Metal Oxide Composite Adsorption Method (FMBO Absorption)
2. Electro – Coagulation Method (EC Module)

Advantages. Compared to current various technologies such as Reverse Osmosis and Ultra-Filtration, both of the two technologies are:

- Much lower electricity consumption and maintenance cost;
- Able to remove arsenic while retain ions that are good for human-being.

The two technologies are most beneficent to rural areas and mountainous areas.



Operation Illustration

Because of the high concentration of contaminates, the project will use both of the technologies as a two-step treatment.

System operational cost

10 RMB for each household per year!

Since the villagers are already paying for the existing pump electricity and system maintenance fee, the 10 RMB is to cover the operational cost bring by our water system.

10 RMB includes: Absorption agent cost and EC Module electricity consumption.

Current status

The water treatment systems at two villages had been installed by the end of June, 2009. The water quality had been analysed by local CDC and proved to be qualified. The two water stations have started to provide safe water to residence since August, 2009.



Attachment: Introduction to Global Health and Education Foundation

For more information, please contact:

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[Attachment]



Global Health and Education Foundation

- Creating Hope and Opportunity -

About Us

The Global Health and Education Foundation (GHEF) is a non-profit organization that dedicates to improving the health and well-being of individuals globally by providing comprehensive, needs-based solutions enabled by innovative and proven business models and technologies.

Our beneficiaries and customers are citizens of under-served, urban and rural areas of the developing world. Our partners will include local companies, multinational corporations, NGOs, and government agencies. In China, our partners are Chinese Academy of Sciences and Ministry of Water Resources.

- Incorporated June 15, 2005
- Founder and Chairman: Mr. Kenneth E. Behring
- Headquarter: Danville, California, U.S.A.
- Organization classification: Public Charity
- Official website: <http://www.ghefoundation.org/>

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