

Environmental Engineering Company

Realizing a Safe and Secure Solution to Waste Treatment

Ebara Environmental Plant Co., Ltd. (EEP) provides total package environmental solution services, from the engineering and construction of waste treatment facilities to their operation and maintenance. In wake of the Great East Japan Earthquake in 2011, the Japanese waste industry underwent drastic changes; this including the growing emphasis on waste power generation due to power shortages and being faced with the urgent task of removing debris from the disaster. In the meantime, EEP works actively in disposing earthquake debris in the Kesenuma Block, Miyagi Prefecture and, as a Power Producer and Supplier, delivering electric power converted from the heat generated by incinerating municipal solid waste (MSW) to local consumers. As a member of the EBARA Group, EEP also works to implement a business continuity management system (BCMS). It is also keen to improve quality of its products and services by promoting standardization and maintaining complete management over safety and health to realize safe and secure solutions for waste treatment to respond to social demands.

Treatment of Waste Properly and Creating Energy Sources

◆ Earthquake Debris Treated in Temporary Incinerators in the Kesenuma Block

EEP was awarded an order to build temporary incinerators and dispose earthquake debris by a project-based joint venture formed with the Tohoku Branch of Taisei Corporation, which had been entrusted with the “Disaster Waste Disposal Project (Kesenuma Block),” as a representative enterprise and has built two temporary incinerators (one in the Hashikami District and the other in the Koizumi District respectively) in Kesenuma City, Miyagi Prefecture. These incinerators have been in successful service on schedule. They are intended to incinerate disaster waste left in Kesenuma City after the Great East Japan Earthquake in 2011. The structure of the furnace designed for withstand incinerating disaster waste while producing minimal amounts of environmental emission. We plan to complete the disposal of debris by November 2012, and will continue in contributing to the swift restoration of disaster stricken areas.



Temporary Incinerator in the Miyagi Kesenuma Block (Hashikami District)

◆ Local Production of Waste-Generated Power for Local Supply

About 24% of all waste incineration plants in Japan are equipped with generators, providing a total power generating capacity of about 1,700 MW (source: Ministry of the Environment Waste Treatment Engineering Information FY2010

Data). Amid power shortages, waste incineration plants draw attention as a distributed power supply. As a Power Producer and Supplier (PPS*), EEP proposes a scheme of local production of power for local supply, under which surplus power generated at waste incineration plants is purchased and delivered regionally.

As the prototype case of the scheme of local production of power for local supply, the power generated at Warabi Toda Eisei Center in Saitama Prefecture for which the company undertakes operational management under contract is purchased by the company in its total quantity and supplied to the city halls of both Warabi City and Toda City and also to seven elementary schools in Warabi City. Starting from 2012, the surplus power of 1,600MWh generated at Warabi Toda Eisei Center has been delivered to municipal facilities in both Warabi City and the adjacent Toda City. According to an official announcement made by Warabi City, this represents an annual revenue increase of ¥ 10 million in the Warabi Toda Eisei Center Union, helping to mitigate the municipal financial burden. The Next Environmental Project Center (provisional name) now under construction in Hiratsuka City, Kanagawa Prefecture is slated to be commissioned into service in October 2013. The project will incinerate municipal solid waste (MSW) collected from Hiratsuka City, Oiso Town and Ninomiya Town and uses the heat generated from its incineration to generate 5,900 kW of power and supply it to the surrounding areas, with the reduction of its own consumption. The Environmental Engineering Company drives this project as a pioneering endeavor that positions the waste treatment facility as a regional energy center.

Continuing with Business in Times of Disasters

In line with the development of a business continuity management system (BCMS) in the EBARA Group, EEP followed suit by launching its own version of BCMS. It has set up a Business Continuity Management Committee headed by the President as chairperson, along with the Disaster Preparedness Committee to take specific actions as a subordinate body of the Business Continuity Management Committee, to proceed with a renewal of the incident management plan (IMP) and the business continuity plan (BCP) to be launched upon occurrence of disasters. The development of systems of crisis management is also in progress at those facilities under our operational management under contract, in consultation with their customers on their concepts of disaster handling. This involves formulating guiding principles, rules of conduct and plans, plus educational and training programs, to prepare against the occurrence of earthquakes with an intensity of 5 or higher, fires, blasts, chemical spills and other accidents, the epidemic outbreak of new strains of flu and more. We shall develop crisis management systems such as these in around 70 facilities under our operational management nationwide, and establish a system for continuous improvement.

2. The EBARA Group innovates to supply technologies, products, and services that delight its customers.

Pursuing Better Quality

Engineering standardization has been promoted to help improve our engineering capabilities. Engineering standards that cut product life-cycle costs have been established on two models so far. Promoting engineering standard will not only pursue performance and cost reductions but also will lead to better product quality with fewer engineering errors. We will continue offering products that address the social needs, such as higher power generation efficiency.

As concerns over aging social infrastructures infiltrate our society, the need to keep waste treatment facilities longer-lived while maintaining performance elevates. We are proposing to our clients maintenance and renewal programs based on the concept of stock management*2 advocated by the Ministry of the Environment, so that we can carry out the fixes and renewals relevant to predicting equipment lives and keeping up with performance at an optimal timing. OJT education for employees is in progress to enhance their capabilities to check up equipment on-site and thus help find out the optimal timing to fix or renew the equipment.

We are keen to build up field capabilities continually out of our belief that better service quality leads to better customer satisfaction. Plant or electrical engineering instructors have been appointed so far to educate field employees at the facilities for which the instructors undertake operational management under contract. The house magazine "O&M Net," published since FY2011, introduces instances of such activity at the facilities nationwide under contract for operational management to bolster our network of sites and communication among them. We seek to improve the quality of information we provide to stimulate originality and ingenuity at the sites and fuel performance improvement.

Safety and Health Activities

Since the occurrence of a nuclear power plant accident in 2011, nuclear waste treatment facilities located in the northern Kanto Plains and further up have been challenged with a task of nuclear waste disposal. Promptly after the accident, EEP has worked out a safety standard and a work manual with regard to the handling of nuclear waste containing radioactive substances and occupational exposures to high levels of radiodensity and has administered education on workers at the facilities located in Fukushima Prefecture, Chiba Prefecture and more and also on our subcontractors' employees. Safety and health-conscious operations are carried on at these facilities as they keep close communication with their customers to exchange information on how to realize safe and secure waste treatment and to respond to various tasks and also ensure thorough perfection of dose management for their employees.

CSR Action Plan for FY2013


The company's CSR Action Plan for FY2013 calls for:

- ① Building a BCMS and establishing a scheme of its continual administration;

- ② Maintaining a system of crisis management at the facilities for which we undertake operational management under contract at about 70 locations nationwide and improving on the scheme continually ; and
- ③ Launching a Hiratsuka Plant and promoting the scheme of local production of power for local supply.

VOICE

Voice of a subcontractor




Enhance safety consciousness to eliminate accidents

Mr. Kazuyuki Shimazaki,
President, Association of Ebara Environmental Safety Subcontractors
Sales Division Manager and Director, Towa Refractory Engineering Co., Ltd.

The 130-member Association of Ebara Environmental Safety Subcontractors aims to get construction works done safely and smoothly in association with EEP. Continual education provided by holding periodic supervisor education sessions and environmental safety operator workshops helps upgrade the members' capabilities. In addition, the Association's regional patrols and joint patrols by the EEP head office and the Association's headquarters and regions are held periodically. These patrols should encourage the managers, workers and individual employees to discuss site-specific problems from diverse perspectives to augment their safety consciousness and to eliminate accidents.

VOICE

Voice of a safety and health representative



Acting on the Guiding Principle "Safety before anything"

Kaoru Oneyama,
Manager, Environmental Safety Management Office
Engineering and Quality Division,
Ebara Environmental Plant Co., Ltd.

Our company has construction works, repair works, operational management and inspection and maintenance works in routine progress at our sites nationwide. An environmental safety and health management policy has been set up to get these works done safely and efficiently. The basic policy established for this year reads: "Realize a comfortable, reassuring workplace environment in which our customers can live a safe, healthy life, by acting on the guiding principle Safety Before Anything." To this end, prioritized items, including thorough compliance, risk mitigation through risk assessment, hazard prediction and other activities and enforcement of the 5S's (seiri, seiton, seiso, seiketsu, and shitsuke in Japanese, meaning sorting, set in order, systematic cleaning, standardizing and sustaining), have been set forth and pursued in a company-wide effort. Our subcontractors sympathize with the concept of these activities and help us form a safe, comfortable workplace environment.

* 1 [PPS] Power Producer and Supplier.

* 2 [Stock management] A generic term covering systems of technologies and management techniques designed to keep waste treatment facilities longer-lived and thus cut their life-cycle costs while maintaining a required level of performance.