The Study for the Development of an Integrated Solution Related to Industrial Waste Management in the Industrial Pole of Manaus

Newsletter

Volume 6

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Consensus Building Workshop

SUFRAMA hosted the 3rd Workshop of the study on April 6, 2010. A total of 127 stakeholders attended to hear presentations and provide feedback on proposals to formulate a preliminary version of the Master Plan for Industrial Waste Management (IWM) in the Industrial Pole of Manaus (PIM), to be implemented from 2011 to 2015. The morning consisted of 4 presentations and a Q&A session on the following subjects:

1. On-site industrial waste management (i.e. at factories) in Japan
2. Off-site IWM (i.e. by waste service companies) in Japan
3. IWM administration as practiced in Japan,
4. The approaches and measures in the Draft Master Plan.

Participants were welcomed back in the afternoon to participate in group discussions (see below). At the end of the day, a summary of these discussions was presented to the entire audience, and time was given for further clarification questions and to add any final comments.

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Database Orientation Meetings

In order to inform stakeholders about new procedures currently under consideration, two meetings were held on April 7, 2010 pertaining to the use of databases created by the JICA Study Team together with counterparts from SUFRAMA and IPAAM for factories and waste service companies. A morning meeting served to orient factories with a database to effectively manage waste inventories. An afternoon meeting was held for companies dealing with waste services, dealing with new licensing procedures being proposed and a database to promote licensed waste service companies.

Factory representatives were invited to a morning presentation dealing with a database currently under development for waste inventories, which all factories in PIM must submit as required by Amazonas State according to CONAMA Resolution 313 (Art. 8). The new system will allow factories to prepare the waste inventory not only on a paper form, but also online. This will clarify

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Workshop 3 Discussion Groups

Many Workshop 3 participants remained for the small group discussions which took place in the afternoon. Participants were invited to join one of three discussion groups:

1. On-site Industrial Waste Mgmt (14 ppl)
2. Off-site Industrial Waste Mgmt (23 ppl)
3. IWM Administration (41 ppl)

A number of suggestions were generated by the participants in each group, which helps to strengthen ties between relevant stakeholders.

The first group discussed on-site IWM at factories. Suggestions were given regarding the need to calculate and classify wastes in a more practical manner related to market value and level of risk. There were also many suggestions for technical needs, such as creating standards and making more information available online; many voiced the

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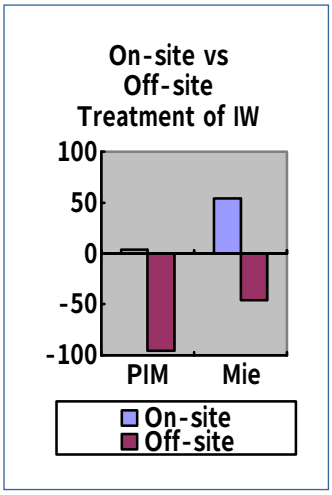


The morning presentations were all given by study counterpart personnel who participated in a 2-week training program on industrial waste management in Japan.

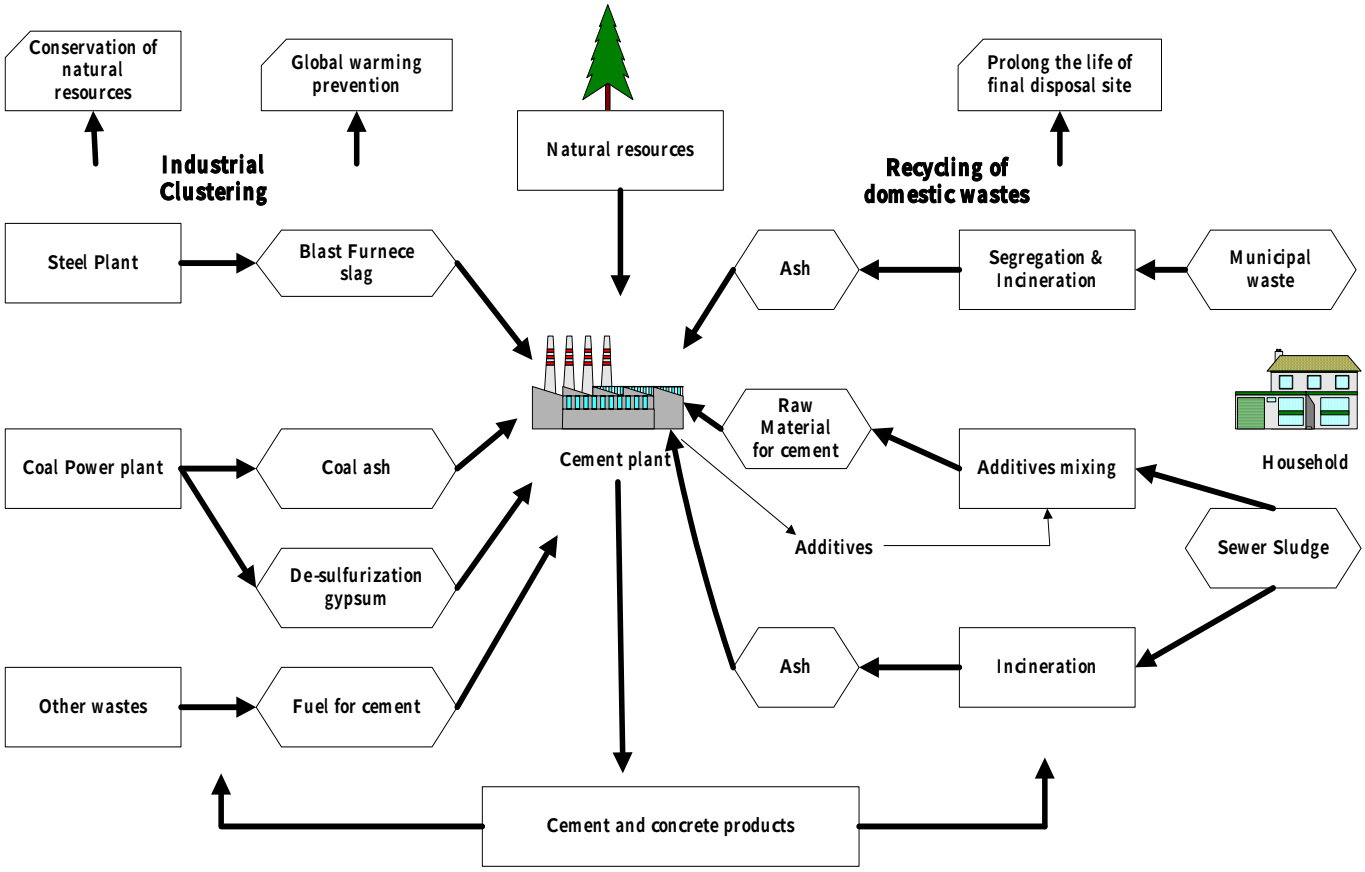
The first presentation (Mr. David Silva Rocha, SUFRAMA) covered on-site industrial waste management in Japan. Mie Prefecture in Japan, for example, manages more than half (54%) of its industrial waste on-site at factories, whereas the on-site rate in PIM is less than 5%--nearly all IW is treated off-site (see graph on left). Two specific on-site management examples from Japan, Kokubo Industrial Park and Honda's Suzuka Plant, both involving the concept of "zero-emission", were given (see page 4).

Examples of off-site industrial waste management in Japan were given (Ms. Rita Cássia Marie, SUFRAMA), presenting 18 facilities visited which conduct treatment (by IW incineration, PCB treatment, health waste incineration, and ash melting), recycling (of construction waste, electronic waste, and waste solvents as well as energy-from-food waste), co-processing (of incinerator ash, combustible wastes, and at a cement plant—see image below), blending, landfill (incl. leachate treatment), and an overall IWM center. With a total of over 21,000 such facilities in Japan, as well as a high tipping fee to encourage waste reduction, only 6% of Japan's total waste amount went to final disposal in 2006.

"Only 6% of Japan's total waste amount went to final disposal in 2006."

The third presentation on IWM administration in Japan (Mr. Armando Bandeira dos Santos Jr., SUFRAMA) covered the roles and responsibilities of public and private parties regarding industrial waste. Following an overview of the legal framework based on developing a "sound material-cycle society", examples from the Tokyo Municipal Government plan were given, such as targets to reduce natural resource consumption and waste generation, and minimizing environmental risks in the process of waste treatment. Finally, suggestions garnered from the training were given from SUFRAMA technicians for the Master Plan.

All presentation materials are available on the SUFRAMA website to details. ❖



Draft Master Plan

The Draft Master Plan was presented to stakeholders as the final session in Workshop 3, before smaller group discussions. The presentation, given by Mr. Antonio Ademir Stroski of IPAAM, informed participants of current industrial waste management issues in PIM, as well as the objective and an outline of the Industrial Waste Management Master Plan (IWM M/P) in PIM.

The Master Plan is essentially a 5-year action plan (target year: 2015) which aims to establish appropriate treatment, use of the 3Rs—reduce, reuse, recycle—and avoid improper practices in order to eliminate negative environmental impacts.

The four issues primarily facing PIM are that of: (a) the need to clarify practices, (b) lack of an adequately licensed landfill, (c) inconsistencies in administration, and (d) a poor business environment in which waste service companies operate. The objective of the Master Plan is to establish an appropriate industrial waste management system in PIM by tackling these issues.

Measures that make up the Master Plan, as currently proposed, include establishing effective systems for waste manifest and waste inventory requirements, securing final destination for industrial waste through provisional and long-term means, strengthening administration of IWM through capacity building, regulation and cooperation between stakeholders, and also cultivating a business environment that will eliminate improper disposal and foster preferred practices.

See the presentation materials on SUFRAMA's website for details. ❖

Brazilian counterparts to the Study presented current results to Workshop 3 attendees on April 6, 2010 in the SUFRAMA Auditorium.

'Database' (Continued from page 1)

the amount of wastes that are being treated on-site (i.e. at the factory) and off-site by contracted waste service companies. With this information at hand, it will be possible to construct a flow of all the wastes in PIM, from cradle-to-grave, contributing to sound environmental conditions and improving the business environment. Nearly 40 representatives from factories in PIM "which had submitted their waste inventory the previous year" attended, and their feedback will be valuable in establishing the new measures.

For the afternoon session, waste service companies that cooperated in the baseline survey were invited for an orientation meeting on a new license category for waste management which IPAAM plans to introduce in the near future, as well as a Waste Service Company (WSC) Database being developed that will assist in promoting and selecting companies in the IWM marketplace. Representatives from nearly 30 of these WSCs participated. Study members explained the proposed categories for municipal (code 33) and industrial (code 34) waste management. When companies dealing in collection/transportation, intermediate treatment, reuse/recycling, and final disposal activities apply for an operation license, they will be registered into the WSC Database at IPAAM. A webpage that promotes these preferred companies will be accessible by factory IWM officers who select companies to entrust their wastes for off-site treatment and disposal.

The use of these databases will not only contribute to meeting requirements by CONAMA Resolution 313, but also serve to eliminate non-licensed companies, improve collaboration between administrative bodies, waste generators and WSCs and establish appropriate IWM in PIM. ❖

Please visit
the Study website:
http://www.suframa.gov.br/suframa_publicacoes_jica.cfm

"Zero-emission" Factories in Japan Eliminate Waste for Final Disposal

Brazilian counterparts to the study visited Japan for training on industrial waste management. During the training, visits were made to Kokubo Industrial Park and Honda's Suzuka Plant to provide good examples and introduce the concept of "zero-emission". These examples were presented at the 3rd Workshop.

At Kokubo Industrial Park in Yamanashi Prefecture (Japan), there are 28 companies working together to reduce and recycle their waste as much as possible. The park established a "zero-emission" policy in 1995, and since has been able to jointly recycle paper, and packing materials, treat combustibles to produce RDF (refuse-derived fuel), and compost organic waste for fertilizer. At present, the factories are engaged in activities to recover valuable materials and reduce several wastes. By providing each factory with a handbook for the internal procedures to treat waste, the factories in Kokubo Industrial Park have reduced their raw material needs and made logistical areas more efficient. Diligent separation of wastes has proved to be vital to recycling, and partial treatment such as compressing cans and metal scraps has eased storage and collection.

> Zero-emission is defined as "no IWM [destined] for final disposal discharged outside the factory".

Honda's Suzuka Plant created their Green Factory Project in 1997, which included a target for achieving zero-emission, defined as "no IWM [destined] for final disposal discharged outside the factory". The plant achieved their zero-emission target in 1999, becoming the first automobile manufacturing company to do so in Japan.

For more information on training for on-site management of industrial wastes in Japan, please visit the SUFRAMA website to access the presentation materials. ❖

Announcement of Seminar in May

On 27 May 2010, SUFRAMA will host a seminar to announce the findings of the study, and promote the draft master plan proposed by the JICA Study Team in collaboration with study counterparts. The seminar aims to attract a wide range of stakeholders and participants in the earlier workshops will be contacted directly. Others who would like to attend are encouraged to contact SUFRAMA beforehand for details. ❖

'Discussions' (Continued from page 1)

need to improve the waste inventory and manifest systems. In addition, there was a noted call for better in-house education of technical staff, more collaboration between companies, and inclusion of higher levels of government. Lastly, there were suggestions for incentives, such as discounting licensing and other fees, to encourage ISO 14001 certification.

The second group discussed off-site IWM, and the need for a more attractive business environment. Concern was expressed for how to strengthen the market, particularly for waste treatment. Participants agreed that wastes were a valuable source of raw material and a database could be an important tool to manage them. However, they noted the need for diligent monitoring of information for such measures to be effective.

The third group discussed the proposed Master Plan of PIM and improvement of environmental legislation. A multitude of issues and suggestions were offered by a large number of participants. Concern with high energy costs and taxes as well as environmental liability issues were discussed, with the hope that market improvements will balance costs with services, and also attract investors. Moreover, the need for viable final destination for industrial wastes, including hazardous wastes, was noted as a priority. Furthermore, cooperation between waste generators and waste service companies, academia and industry, and the government and recycling companies were seen as pivotal areas to build relationships to improve the situation in PIM. Lastly, education, both at the household level and for factory technicians, was regarded as an important factor.❖

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