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Feature Column

Introducing Taiwan's Environmental Inspection System

The Bureau of Environmental Inspection has already been up and running for one and a half years now, and despite changes made to streamline staff, the bureau has managed as usual to make some very impressive achievements. This year's work has centered on recycling and reusing food waste and large discarded objects, managing the opening, closure and restoration of sanitary landfills, investigating pollution, and handling cases of illegal dumping of industrial waste. Such work will assist the central government reach its goals of resource recycling and waste reduction.

The EPA's Bureau of Environmental Inspection (BEI) was officially established on March 1, 2002 and has been in operation for over a year now. In cooperation with plans to streamline the former provincial government's work operations, the EPA's Central Taiwan Division was combined with three regional supervisory

branches into one unit to become the BEI. Most of its members were employees of the former provincial Department of Environmental Protection, and their work content and organizational structure have been retained for the most part. The EPA is the authoritative body of the BEI and the bureau is on an even par with the rest of the departments under the EPA. Accordingly, any changes made in staff and budget must be examined and approved by the EPA.

The BEI and the three regional BEI branches in northern, central and southern Taiwan share responsibility for carrying out supervision of environmental protection

affairs. The main focus of their work is to coordinate and supervise the nation's garbage plans, investigate and handle incidents of illegal dumping of industrial waste, manage the closing, opening and restoration of garbage sanitation landfills, oversee environmental inspections and handle public nuisance disputes, as well as oversee tracking efforts of environmental impact assessments.

Regarding the organization of personnel, former director of the Central Taiwan Division, Hoang-Jang Chang (張晃彰) is now the director of the BEI, which has retained its current organization of three chief branches and seven divisions. At the time of its estab-

In this Issue

Feature Column: Introducing Taiwan's Environmental Inspection System.....	1
Revised Regulations Facilitate Efficient Use of Water Resources.....	4
New Act Drafted to Advance Environmental Education.....	5
Taipei-Keelung Partnership: New Model of Regional Garbage Disposal.....	6
EPA Launches Brand New English Website.....	7
Marine and Air Units Successfully Rescue Grounded Al Farabi.....	8
EPA Sets Up Team to Remove Investment Barriers.....	9
Schools Receive A+ for Battery Recycling Efforts.....	10
Incentives to Report Polluting Vehicles Modified.....	11
Briefs.....	3
Activies.....	9



This county hall has established its own composting facility to recycle food waste.

ishment last year, the BEI had a total of 272 staff members. However, in coordination with a policy to streamline staff, the BEI set a goal to downsize this number to 60% of its original staff. Despite the fact that there is now 40% less staff, the bureau's workload has not been reduced, making each staff members' job duties all the more arduous.

With regard to financial matters, Director Chang indicated that the BEI had a total budget of NT\$2 billion this year. Inspections, clampdowns and reports lodged against environmental protection violations made up around NT\$500 million of expenditures, 70% of which comprised fixed expenses for staff, travel and insurance. Of the remaining NT\$1.5 billion budget, NT\$900 million was invested in the essential work of managing the construction of new garbage landfills and handling the opening, closure and restoration of old landfills. The remaining NT\$600 million will be spent on recycling and reuse of large garbage items, industrial waste and organic food waste, as well as on clamping down on illegal disposal of industrial waste.

Recycling of Food Waste and Large Garbage Items

According to EPA statistics, food waste accounts for 27% of household waste. Just by recycling food waste, efforts to reduce the amount of general waste would be much more visible. Starting in 2000, the EPA began promoting clearance and recycling of food waste, mainly in the form of education, setting up food waste recycling and separation systems, and establishing models and methods of reusing food waste. Food waste recycling is currently one of the BEI's major areas of focus and it has already carried out three years of work in this area.

NT\$300 million of last year's budget was invested in this area and another NT\$100 million is being put to use for this purpose this year. The bulk of this fund is used to subsidize the remodeling of local garbage clearance vehicles with food waste recycling equipment and for procuring of a large quantity of food waste recycling containers.

Up to the end of June, a total of 140 villages and townships have joined food waste's clearance and recycling plan, already over 450 metric tons of food waste is recycled daily.

The current procedure used for recycling food waste entails first sorting and storing food waste at the household level, and then clearance and processing of the food waste. Pig raising operations and composting operations are the primary means used by local environmental protection bureaus (EPBs) to handle food waste. Currently, 68% of food waste is recycled at pig raising operations. Although food waste is first ground up and steamed at a high temperature before it is delivered to pig raisers, out of consideration for pigs' health, this ratio will not increase in the future and composting operations will be the preferred processing method instead. Six composting facilities for food waste will be installed around Taiwan. Tainan City and Taichung County's Wufeng Township (台中縣霧峰鄉), composting facilities are already in operation, while Penghu County has completed construction of facilities and is applying for

certification. Tainan County, Taichung County's Sinshe Township (台中縣新社鄉) and Taidong County are still in the process of building composting facilities.

This year the BEI will allot subsidies to 25 counties and cities to carry out food waste recycling work (excluding Kaohsiung City, which has adopted a BOT model to set up its own composting facilities). Up to the end of June, a total of 140 villages, townships and cities have joined under this plan and already over 450 metric tons of food waste is recycled daily. To meet the resource recycling goal set by the EPA, the BEI is planning for a gradual annual increase in the volume of recycled food waste, from 600 tons/day in 2003, to 900 tons/day in 2004, and eventually to 1000 tons/day in 2007. Such impressive goals show the BEI's grasp of the concept and spirit of sustainability.

Also related to general household garbage, further plans have been designed to recycle large waste materials. Much of household waste includes items like furniture that only require a few repairs or can be disassembled and recycled. Such work goes a long way to reduce the volume of waste that ends up in incinerators or landfills. In 2002, the EPA began promoting the recycling and reuse of large waste items and subsidies are provided to local agencies to purchase equipment to help clear away large items and install recycling facilities. The budget for this year's plans in this area will reach a scale of around NT\$200 million.

Construction of 54 Sanitary Landfills

Targeting waste reduction as one of the ongoing goals in the area of garbage disposal, the BEI is following up on the EPA's six-year "Third Garbage Disposal Plan for Taiwan" (台灣省垃圾處理第三期計

劃) by launching the "Taiwan Area Garbage Disposal Follow-up Plan" (台灣地區垃圾處理後續計劃), which will be carried out from this year to 2006. In addition to handling the opening, closure and restoration of garbage landfills, this plan also addresses the disposal of incinerator ash.

Although many counties and cities have already built or are in the process of building incinerators, there are still five areas — Keelung City, Yunlin County, Tainan County, Ilan County and Nantou County — that currently do not have their own incinerators. Also, in light of the fact that incinerators need to 'rest' three months out of every year for annual inspection, sanitary landfills still play an essential role. Up to the end of July this year, the EPA has subsidized the construction of 54 garbage landfills, 15 of which have been completed, 20 of which are still in the process of construction, and 19 are still in the planning. It is estimated that after all of these landfills are in operation, an average of about three to five townships will be able to share one sanitary landfill between them.

Currently, each county hall is in charge of sanitary landfill operations within their jurisdiction. However, now the EPA encourages regional cooperation to entrust private engineering companies to handle operations in light of the following three considerations: 1) insufficient local funds, expertise and garbage disposal manpower, 2) wastewater continues to seep out 10~15 years after closure of landfills, and 3) according to the *Water Pollution Control Act*, professional technicians must be called in if a landfill seeps over 100 tons of pollution per day. Therefore, the EPA is currently encouraging townships to adopt regional cooperation schemes to handle wastewater problems at local sanitary landfills.

As regards clearance of industrial waste that has been dumped illegally, (which in most situations involves illegal dumping of waste soil left over from construction) if the dump site is not limited to just one county or city and spans boundaries between different regions, the BEI will enact a regional joint control mechanism. Such mechanisms are enacted through the three regions under control of the northern, central and southern branches of the Bureau of Environmental Inspection. These regional joint control mechanisms can be applied to all industrial wastewater discharges causing river pollution, or emissions causing air pollution.

As for problems involving the disposal of hazardous industrial waste, the 17 top listed sites in the first half of this year are posted as having serious hazardous industrial waste problems. The BEI has already completed cleanup work on 12 of these sites and five sites are still in the process of cleanup. For sites with moderate pollution, local environmental protection bureaus are to assume authority over maintaining tracking and listing of such sites. To date, a total of 55,200 tons of substances, including 40,904 tons of hazardous industrial waste, 3,001 tons of containerized hazardous solvents, and 11,196 tons of general industrial waste have been cleared away and disposed of.

Joint Efforts Combat Environmental Crime

To obtain the best results from inspections, the BEI works in alliance with the Environmental Police Unit with a joint mode of attack against environmental crime through the dual forces of environmental inspectors and administrators of justice. The results of this teamwork have been outstanding. This mechanism has already been put in practice for a year and will

be continued in the future.

Apart from waste management work, the Bureau of Environmental Inspection also carries out random inspections and double-checks on pollution sources, oversees the implementation of pollution controls, investigates environmental pollution at pollution sources, handles emergency response notification procedures, and supervises environmental impact assessments. In view of the BEI's strategic geographic location in central Taiwan and its close relationship with local environmental protection bureaus, the bureau will coordinate with all divisions in the EPA to execute a large-scale pollution source control plan that reduces pollution source emissions and mobilizes resources in a more flexible way. In the area of strengthening the handling of serious cases of environmental pollution and citizen appeals, the BEI will continue to sternly administer justice and not only devote all effort toward curbing illegal behavior that pollutes the environment, but also take precautions against further environmental crimes in the future.

For more information, please call 04-2252-1718

News Brief

Recycling Fund Management Board Receives ISO9001 Certification

In order to establish Standard Operation Procedures (SOP) to expedite domestic resource recycling efficiency and upgrade the efficiency of services for citizens, the EPA Recycling Fund Management Board has already completed 39 SOP documents and at the end of April 2003, passed an audit by the Bell international certification organization to receive ISO9001 quality assurance certification.

Water Quality

Revised Regulations Facilitate Efficient Use of Water Resources

Dedicated to protecting water resources and increasing the applicability of regulations, the EPA is concentrating efforts on reevaluating water pollution control policies. Eleven regulations related to water pollution control have been earmarked for revision. Some of the changes include allowing reuse of treated wastewater that has passed the *Effluent Standards*, expanding the parameters for entrusting wastewater treatment, and charging fees based on the number of accumulated days after the inspection, excluding days required for analysis. These revisions are anticipated to impact over 16,000 enterprises.

This year's United Nations Environmental Plan (UNEP) report indicated that within fifty years over half the earth's population will feel the impact of depleted water resources, attributing poor management as the primary cause of water resource depletion. Taking into consideration the feasibility of implementation as well as water conservation, major adjustments have been made to the EPA's water pollution control policies. Updated revisions to 11 items related to water pollution control regulations will be completed by the end of July. The EPA estimates that these changes will impact a total of 16,000 factories, livestock operations, and other enterprises contributing to wastewater problems.

Efficient use of water resources has been taken into consideration for those wastewater treatment regulations directly related to industry so that in the future, treated wastewater that accords with *Effluent Standards* can then be reused and used for purposes other than soil treatment. However, if the water is recycled for use in the plant's manufacture process, *Effluent Standards* restrictions will not be applied. To effectively manage wastewater recycling and to provide convenience to operators, enterprises need only submit their Wastewater Recycle Use Plan and *Effluent Standards* certification

documents. This information should be provided to the local environmental protection bureau (EPB). Large-scale industries are an exception to this rule and are additionally required to submit their Water Pollution Control Measures Plans Report for review.

Another revision entails allowing all treated wastewater to be used for irrigation and dust prevention purposes. In the past, even treated public wastewater was prohibited from use for irrigation. However, the EPA has referenced the U.S.'s experience with its longstanding irrigation standards and has carefully considered the danger of human exposure. Based on the results of these considerations, new revisions have been made to the original *Soil Treatment Standards* (土壤處理標準). Treated industrial wastewater that passes environmental impact assessment reviews, and water from public wastewater treatment plants, school wastewater, and treated community wastewater sewers can then be directly discharged into the soil, or used for irrigation or dust prevention. Wastewater from livestock, aquaculture, sugar processing and other industries that produce organic wastewater, can also be directly discharged into the soil after undergoing treatment to a certain standard.

Soil treatment dynamics can then process the pollution in this wastewater.

In addition, wastewater treatment pipe system restrictions will also be eased in the future. The EPA has been attentive to the suggestions of enterprisers and has taken into consideration the excess capacity and capability of many industrial parks and factories' wastewater treatment plants to treat additional amounts of same-type wastewater. Thus, for the current revisions the EPA has specifically added regulations regarding vehicle transport of wastewater for authorized treatment, which makes further strides towards meeting the practical needs of industry.

With regard to administrative procedures, the EPA is striving to make things more convenient for the public by greatly simplifying what once was a complicated process. According to the new revised regulations all that is necessary is to fill out the assigned form for the specific type of wastewater pollution control measure. Simultaneous application is possible in the event that one or more operations are being implemented at one time, such as wastewater treatment equipment installation, wastewater discharge into the soil and surface water, and/or recycling of wastewater. This method will alleviate the need for multiple applications and examination procedures, and only requires one review fee, which equates into substantial cost savings for enterprisers.

Furthermore, based on the newly announced accumulated daily penalty standards, in the future, the number of days required to complete the water quality analysis report will not be included in the overall accumulated daily penalty count. In the past, environmental protection agencies began calculating the accumulated daily penalty from the date of examination for those operators whom after in-

spection were discovered not to have made the necessary improvements within the mandatory time given.

However, the Supreme Administrative Court believes that the objective of the accumulated daily penalties is to explicitly supervise and encourage improvement of violators and thus backlogged fines should not be levied. Determination of whether improvements have been made cannot be made on the day of inspection; the results of the water quality tests must be completed first in order to determine if standards are met. For practical implementation, once the on-site inspection has been completed, several days are needed to process and compile the final report. Therefore this item has been expressly revised in accordance with the Supreme Ad-

ministrative Court decree. In the future, those days used for conducting tests on water quality can be deducted from the accumulated daily penalty tally.

The original *Water Pollution Control Act* required all enterprises, both small and large, to report once every two, four, and six months. Another simplified procedure enacted in the newly revised version requires that in the future enterprises only need to undergo regular analysis and report once every six months. This greatly streamlines the complicated process involved in report procedures.

For more information, please call (02)-2311-7722 ext. 2830 or log on to the EPA Department of Water Quality website (<http://www.epa.gov.tw>) to download relevant information.

citizenry, is a lifelong process, integrates science and technology, and is holistic. In light of this, the draft looks on the recently passed U.S. EPA Environmental Education Act as a reference, and considers the requirements of national conditions to encompass both social and school education. The EPA will act as the central authority, while the Ministry of Education, Council of Agriculture and related ministries will serve as the authoritative bodies over environmental education professions. It is hoped that after this proposed act is formally implemented, all levels of central and local governments will be able to effectively promote environmental education work.

The draft Environmental Education Act specifies that the EPA should establish a National Environmental Education Fund (國家環境教育基金), which will be used to subsidize environmental education promoters in research and development, promotion and activities. Funding sources will primarily come from government stipulated program allocations, individual or group donations, allocations from funds from fines for environmental protection violations, and funds from soil pollution and air pollution.

The draft document expressly stipulates that each level of government in Taiwan should establish or appoint specialized units and staff to handle environmental education planning, promotion, guidance, incentives and reviews. Also, each authority should invite experts, scholars, related bodies, facilities and groups, to assist in forming an environmental education committee, and coordinate and consult on items related to environmental education.

At the same time, the draft document clearly defines environmental education promotional units as those authorities, institutions, schools, corporations or govern-

General Policy

New Act Drafted to Advance Environmental Education

Nationwide environmental education legislation in Taiwan is progressively being put into practice, and Taiwan's first draft *Environmental Education Act* is almost ready, in conjunction with a long-term environmental education plan. The EPA has recently convened all levels of local environmental protection authorities to consult the first draft *Environmental Education Act*. Agencies, schools, corporations or NGOs involved with environmental education can apply for national environmental education funds, and there will soon be an environmental education advocate training and certification system.

According to the *Fundamental Environment Act* (環境基本法), passed in December 2002, each level of government should make a priority of the dissemination of environmental education and sustainable development related education and study, and further promote environmental education so as to implement environmental protection concepts in daily life. Tying in with this, the EPA began to draw up a preliminary draft of the *Environmental Education Act* (環境教育法草案), and on

July 15 brought together all levels of local environmental authorities to jointly study and discuss this new legislation. It is expected that with ample integration of education in schools and society, and through applying integrated resources, the *Environmental Education Act* will work to formally implement environmental education at every level of society.

Some of the special characteristics of environmental education are that it targets the entire

ment-approved groups related to the execution of environmental education services. That is, those groups who have not yet received government approval are not listed in the regulations, nor will they be eligible for subsidies. Currently there are a great number of environmental groups of all sizes across Taiwan. If they want to receive subsidies from the *Environmental Education Act*, they will need to pay heed to whether or not they meet this stipulation.

Furthermore, the draft document also considers environmental education staff certification. One regulation that is more directly related to personal rights is certification of environmental education promotion staff, which can be done by the authoritative bodies (EPA, Ministry of Education, etc.) themselves, or can be entrusted to colleges, organizations or corporations possessing professional training and accreditation capabilities. Environmental education promoters generally indicates, 1) those with environmental education, interpretation and dissemination abilities, or 2) those who fit the qualifications laid down by the EPA. The latter of these groups possessing professional certification will receive periodic evaluations, and will be rewarded for outstanding contributions in the field of environmental education.

The EPA's Department of Planning has indicated the draft *Environmental Education Act* will commence a second stage of discussions on August 13. This time professors from colleges and universities teaching environmental education related subjects, scholars, experts and delegates from environmental groups will be invited to focus on the contents of the draft document and raise issues or suggestions for improvement. This meeting will also discuss views on how to

make the content and spirit of the *Environmental Education Act* coordinate with needs and make them pertinent to Taiwan's particular conditions, so as to let en-

Waste Management

Taipei-Keelung Partnership: New Model of Regional Garbage Disposal

Taipei City and Keelung City signed a garbage disposal cooperation agreement on July 21, marking the first successful example of cross-county/city garbage disposal cooperation in Taiwan. The EPA, Taipei City and Keelung City all agree that this is a win-win partnership as both sides benefit from the arrangement. All parties advocate that this is a worthwhile model for other counties and cities to follow.

Due to the never-ending generation of household garbage in Taiwan's cities, even though there are plans to construct about ten more garbage incineration plants, those areas without incineration plants must continue to rely on sanitary landfills and therefore face a much greater pressure to reduce garbage volume compared to other localities. However, in the case of the two neighboring cities of Keelung City (which has no incinerators) and Taipei City (which has three incinerators in Neihu, Muzha, and Beitou districts) the two cities have struck up a partnership to help supply each other's needs through what is seen as a great demonstration of collaboration to reduce garbage volume.

On July 21, EPA Administrator Hau witnessed the signing of this cooperation agreement between Taipei City and Keelung City. The contract entails that for every ton of household waste that Keelung City delivers to Taipei's incinerators for processing, it agrees to transport both the ash left over from its own waste as well as one ton of incinerator ash back to Keelung for disposal in its landfills. Both sides have agreed to a six-year expiration date of this contract. For Keelung City,

environmental education take firm root in Taiwan.

For more information, please call 02-2311 7722 ext. 2730.

this cooperation will help to temporarily solve its problem of not knowing where to go with its garbage. Likewise, for Taipei City, this arrangement helps to alleviate the problem of incinerator ash disposal. Therefore both parties view this partnership as a fair exchange, mutually beneficial for both cities.

EPA Administrator Hau expressed that the EPA is optimistic about this kind of cooperation agreement and will encourage other cities and counties to follow suit through a twofold approach of allocating funds for subsidies and setting policies to make such cooperation standard practice. Hau believes that it is worthwhile for environmental protection agencies to adopt the example set by Keelung and Taipei as a way of reducing garbage. Taipei City Environmental Protection Bureau Director Chen Yeong-ren (陳永仁) points out that the signing of this contract is quite significant in that it is the first agreement in Taiwan in which two local governments have cooperated to dispose of each other's waste.

As construction is gradually completed on the nation's new garbage incinerators, the *Waste Disposal Act* has raised the responsibility of household garbage disposal from the local level to the county level,

encouraging county-to-county partnerships. The EPA is also currently adjusting garbage disposal policies. In the future, each county and city's garbage disposal systems will be deployed from a regional perspective and in the most economical way possible, integrating resources such as incinerators, landfills and incinerator ash treatment facilities. To further promote this policy, the EPA regularly trains each local government to complete county/city Regional Garbage Disposal Plans as the first step behind advancing an integrated garbage disposal system that links neighboring regions.

In fact, the concept of regional cooperation on garbage disposal has been around for years. From small localities to the county level, garbage is collected and brought to one area and then transported to incineration plants for disposal. On a larger scale, counties and cities transport local garbage to nearby county/city incineration plants or landfills. Both cases are examples of regional cooperation. The EPA Department of Waste Management points out that most garbage clearance and disposal is currently handled by city/county agencies, and therefore there is less resistance to promotion of regional cooperation within the city or county itself. As for garbage disposal cooperation between two counties or cities, in order to call it mutually beneficial regional cooperation, there must already be intrinsic mutually beneficial terms such as is the case between Taipei City and Keelung City, where both parties have chips to trade with. As such, although the EPA applauds such regional cooperation, and this policy has already been accepted at the local level, if Taiwan is to really successfully support this model it will be necessary to promote it one case at a time.

For more information, please call 02-23117722 ext. 2622

General Policy

EPA Launches Brand New English Website

The new English version of the EPA's website is completed, now providing even more and newer environmental protection news and intimate functions. People around the world can now enjoy instant access to this diverse information source and gain a better understanding of the focus and developments of the EPA's policies at their leisure.

In coordination with the government plans to digitize information in Taiwan and make information available in English, the EPA has revamped the English version of its website, not only making more information available but also letting users find their way more easily while browsing. There is now a much more international look and feel to the new website.

The new English version of the EPA website includes the following section headings: "About EPA," "News," "Pollution Control," "Environmental Management," "Initiatives," "Environmental Policy Monthly," and "Laws & Regulations." In addition to a brief description of EPA affairs, the website also includes all 66 issues of the Environmental Policy Monthly from 1998 to the present, 48 environmental protection regulations, and 47 webpages of environmental protection statistics. There are around 70 webpages of information on pollution controls

and over 200 webpages of other relevant information.

To provide international readers with the newest information, the EPA has collected related environmental protection reports from other English media for its environmental news section and includes information on the EPA's public hearings. This system provides an official news channel to people all around the world interested in following developments in environmental protection law.

Apart from updated content, the new website also provides many personal functions such as full text search and a webpage map to help users find information more easily. Moreover, those who would like to receive information from the EPA need only leave their email address and the EPA will proactively send out the newest environmental protection news.

The Department of Environmen-

The screenshot shows the top portion of the EPA's English website. At the top left, it reads 'Environmental Protection Administration' with the subtitle 'Executive Yuan, Republic of China'. To the right, there are links for 'Site Map' and 'Chinese'. Below this is a horizontal navigation menu with links: 'ABOUT EPA', 'NEWS', 'POLLUTION CONTROL', 'ENVIRONMENTAL MANAGEMENT', 'INITIATIVES', 'ENVIRON. POLICY MONTHLY', 'LAWS & REGULATIONS', 'LAWS', 'SEARCH', and 'CONTACT'. A large image of a globe is on the left side. On the right, there is a section titled 'Our Vision' with a paragraph of text and a small image of a person. Below that is a 'Search Our Site' box with a search bar and a 'SUBMIT' button. At the bottom, there is a 'Site Overview' section with sub-sections for 'About the EPA' and 'Pollution Control'.

EPA's new English website provides a wellspring of information and considerate service.

tal Monitoring and Information Management, responsible for maintaining the English website, indicated that the content of the new English website has been designed to meet international readers' needs as far as possible, and a professional foreign editor proofreads and corrects all writing content. For the sake of unifying the structure and style of the whole website, the same content posting mechanism is used throughout the design so that

it is much easier and faster for colleagues to update content in the future.

New information will be continuously added to the English website in the future and offer services to a wider public readership. Wherever you are in the world, you are welcome to browse the remodeled English website and get a feel for the new EPA. Website: <http://cemnt.epa.gov.tw/eng>

Water Quality

Marine and Air Units Successfully Rescue Grounded Al Farabi

The EPA, the Kaohsiung Harbour Bureau and the Kaohsiung Environmental Protection Bureau joined forces to mobilize seven related agencies onto the scene of grounded Saudi Arabia-registered chemical tanker Al Farabi stranded just outside of the Kaohsiung Harbour. After six days, finally the vessel was towed free at 5:35 a.m. on July 29, successfully marking the first time for Taiwan to conduct a ship-to-ship transfer of chemicals.

The 26,000-ton chemical tanker Al Farabi succumbed to the strong forces of Typhoon Imbudo before entering the Kaohsiung Harbor on July 24, and was blown off course. The stern ran aground about 0.19 nautical miles from the entrance of the Kaohsiung Harbour, leaving the hull of the vessel embedded two meters into the sand. The EPA's Department of Water Quality Protection indicated that the EPA was immediately informed that the ship's cargo contained highly flammable or hazardous substances such as fuel oil, diesel fuel, methanol, glycol, and glycerol. As the vessel also carried a large reserve of fuel, it was promptly decided that the Severe Marine Pollution Incident Response Mechanism should be initiated to ensure that every effort is extended in order to prevent a pollution incident.

The EPA pointed out that in last year's August 5th grounding of the Yani No.6 cement tanker in the Kaohsiung Harbour, insufficient

preparation time resulted in delayed response measures and a great deal more follow-up work was required to pull the boat free. The experience gained in that incident however put the EPA on a higher level of alertness during the Al Farabi accident, and it seized the moment to make an emergency rescue. It was decided that the situation required an overall mo-

bilization of resources from related agencies to drag the vessel away before any accidents could happen or before any serious damage was done to the marine environment.

At the onset, the EPA first requested appropriate response equipment and personnel from the Ministry of Transportation and Communications, Coast Guard Administration, Council of Agriculture, Kaohsiung City government, and the Kaohsiung Harbour Bureau. The Coast Guard Administration was asked to handle on-site supervision. Throughout the first three days from July 25 to 27, large tugboats were mobilized yet had failed to drag the vessel free. After related agencies deliberated the situation, it was decided that the ship's agent should arrange for two chemical vessels, the Tai Bah and the Golden Yasaka, to unload and shuttle the chemical substances from Al Farabi to reduce the ship's load and make it easier to pull free.

As this was the first time for a ship-to-ship transfer of chemicals to occur in Taiwan's waters, the potential danger was quite high. The EPA took special care to request the on-site response center to call together all agencies to investigate the response measures proposed by the ship owners. Under a vigilant watch, nearly 10,000 tons of methanol was unloaded in



The Al Farabi offloads chemical products onto the Gold Yasaka.

two stages on July 27 and 28, and finally the vessel was safely towed free at 5:35 a.m. on July 29. By 7:00 a.m. the Al Farabi had been anchored in safer waters.

if not for the assistance, appropriate emergency response equipment and on-site monitoring jointly provided by the Ministry of Transportation and Communications,

Under the mobilization of several related agencies, EPA successfully made the first time for Taiwan to conduct a ship-to-ship transfer of chemicals.

The EPA expressed that a successful ship-to-ship transfer of chemicals requires coordination of many different factors such as fair weather, a close distance between the two ships' hulls and clearance of any objects in the path of transfer. This mission would not have been carried out so smoothly

Coast Guard Administration, Council of Agriculture, the Kaohsiung City government and the Kaohsiung Harbour Bureau. Despite the danger involved throughout the entire rescue and towing procedure, the effort proved to be a spectacular success.

General Policy

EPA Sets Up Team to Remove Investment Barriers

In accord with the Executive Yuan's "Taiwan First" Investment Incentive Program, the entire citizenry should pitch in to boost the economy. Also doing its part to promote the economy, in July the EPA established an interdepartmental Committee for the Removal of Investment Barriers. In the future, this team's focus will be on eliminating barriers to investment in the Environmental Technology Parks in Kaohsiung and Hualien Counties, as well as waste incinerator construction projects.

Last year on November 13, the Executive Yuan approved the "Taiwan First" Investment Incentive Program. The goal over the next five years is to reach annual major investments of NT\$1.2 trillion and up. In order to create work opportunities and spur on stable, sustainable economic growth, Premier Yu Shyi-kun, emphasized "Taiwan First" is the critical foundation for Taiwan's global development. This program has been approved to remain in effect until the end of 2005.

Complementing Premier Yu's call for each department to implement programs in which personnel are designated to attract investment,

the EPA on July 7 announced the *Executive Yuan EPA Committee for the Removal of Investment Barriers Establishment Criteria* (行政院環境保護署排除投資障礙小組設置要點), and established the Committee for the Removal of Investment Barriers.

This committee is an interdepartmental task group, and the EPA will assign the deputy administrator as convener and the secretary-general as deputy convener. Apart from the convener and deputy convener as core committee members, other members will be the EPA Department of Planning Director, EPA Department of Solid Waste Management Director, EPA De-

partment of Performance Evaluation and Dispute Settlement Director, Bureau of Environmental Inspection Director, Department of Incinerator Engineering Director. Other participants will include representatives from the Executive Yuan's Council for Economic Planning and Development, the Public Construction Commission and the Ministry of Economic Affairs, as well as two to three scholars or experts. The committee will schedule to meet once every 3 months.

The primary duties of the committee as pertains to the Investment Program concerning EPA affairs include collecting information and aiding resolution of problems in cases dealt with by the Investment Program, discussing and simplifying executive procedures for the Investment Program, and following-up on and auditing the Investment Program.

Activity

National Environmental Cleanup Contest Kicks Off in August

The EPA has launched a national environmental cleanup contest starting this August. Citizens' organizations, enthusiastic volunteers and other social resources will work together to jointly carry out the contest and act as on-site judges for each county, city and village environmental cleanup project. It is hoped that this activity will encourage local environmental protection bureaus to get more people involved in environmental cleanup and stewardship. The EPA indicated that the judging mechanism for this contest will involve unscheduled assessments and local environmental protection groups will be asked to do on-site inspections every week and announce assessment results. Mayors and county and village chiefs are urged to put an emphasis on environmental cleanup and help create a clean and beautiful Taiwan.

The EPA currently addresses two issues under this program: Environmental Technology Parks and domestic waste incinerator construction projects. These two have been screened as focal issues as they are under direct control of the Executive Yuan, are of a larger scale, and are closely tied with foreign investment. When investors have problems obtaining land, water or electricity, or when any other obstacles arise that in-

fluence investment willingness, they can immediately consult with the EPA Committee for the Removal of Investment Barriers. The committee will convene an interdepartmental meeting of members from related departments, and after consultation, it will assist investors to remove obstacles and allow smooth implementation of investment plans.

For more information, please call 02-2311-7722 ext. 2710

an approach to recycle dry cell batteries, the EPA reached its targeted recycling rate of 10% for the first stage of this program. These exceptional results have proved the value of maintaining this program in future years.

As schools showed excellent overall performance last year, the EPA originally planned to hold an awarding ceremony to commend those participating schools' outstanding achievements and show its approval for their dedicated work to recycle dry cell batteries. However, due to the SARS epidemic at that time, all schools were cooperating with epidemic prevention measures, and therefore the awarding ceremony was cancelled. As a result, the EPA sent out awards and certificates of merit as a means of encouragement.

Two methods were adopted to assess those elementary and junior high schools that participated in this dry cell battery recycling project. The first method was to select those schools whose achievement reports showed over 120 grams of dry cell batteries recycled per person per month (an AA battery is about 6 grams), and then assess and rank the schools in order according to the weight of batteries recycled. The top 30 el-

Waste Management

Schools Receive A+ for Battery Recycling Efforts

Seeing the exceptional results of using schools as an approach to recycle dry cell batteries, to further promote this method the same approach has been expanded to all the nation's public schools. Starting this year, the EPA has openly asked 1,000 schools of all grade levels from elementary to junior college to help reduce pollution by joining in dry cell battery recycling efforts. It is hoped that this initiative will raise this year's dry cell battery recycling rate by a projected target of 30%.

The EPA began recycling discarded dry cell batteries from November 1999. However, due to a low willingness to tie in with this program, the recycling rate lingered at a low rate of 5~6% up until 2002. To add more momentum, the EPA began linking up with the education system to strengthen elementary and junior high schools' dry cell battery recycling efforts. Through cooperation with the Ministry of Education and each local education bureau, elementary and junior high schools were recruited to initiate their own dry cell battery recycling systems. From September 2002 to the end of February 2003, 262 elementary schools and 101 junior high schools participated in the program, for a total of 363 schools in all.

Although only 14% of the nation's junior high school and 10% of the nation's elementary schools joined this program, the recycling rate of

dry cell batteries increased from the previous year's figure of 6% to last year's figure of 10%. Furthermore, the number of batteries recycled by participating schools accounted for 41% of the overall number of batteries recycled in Taiwan during the same period of time. By using schools as



Recycling at schools accounts for a large portion of the overall dry cell battery recycling rate

elementary schools and the top 10 junior high schools were then chosen via this method. The second assessment method involved evaluating schools based on the total number of dry cell batteries recycled, according to the achievement reports submitted by the schools. In the end, certificates of merit and group awards were granted to a total of 40 elementary schools and 10 junior high schools.

Furthermore, in order to expand the range of this program, the EPA's 2003 plan has been expanded to include junior colleges,

high schools, junior high schools and elementary schools. The Ministry of Education and each local environmental protection and education bureaus have cooperated again to openly invite 1,000 of the nation's schools to jointly support this dry cell battery recycling program. Recycling education is being actively carried out to establish the proper concepts of recycling dry cell batteries and put recycling work in action in everyday habits, so as to reduce environmental pollution and raise the target rate for dry cell battery recycling to 30%.

a total of 56,110 cases in the previous year — an increase of 28,752 cases. A total of 111 cases resulted in substandard emission test results, and thus informants were allowed to receive a reward — however, only five informants came to collect their rewards. This shows that most people who report illegal behaviour are doing so in the interest of protecting the environment rather than to receive cash.

Reminding informants to take notice and tie in with government efforts, the EPA has revised a portion of the regulations, on one hand to raise the effectiveness of public action to report illegal emissions and on the other hand to lessen the damage that mobile pollution sources have on air quality. If revisions to Article 4 of this regulation go through, informants will be required to clearly explain the pollution incident and provide evidence as well as leave their name, phone number, and address. The informant should also assist the

Air Quality

Incentives to Report Polluting Vehicles Modified

In order to reduce emissions of moving pollution sources and improve the state of air pollution, the EPA announced the Regulations Governing Reports of Polluting Vehicles and Reward Incentives in 1999. A draft revision of this regulation has just been announced, mainly to raise the efficiency of cases in which informers report air pollution from vehicle exhaust. This new draft regulation replaces the cash reward with a medal of honor, reflecting citizens' proactive attitude in cooperating with environmental protection policy.

To encourage the public to help reduce air pollution from vehicle emissions, the *Regulations Governing Reports of Polluting Vehicles and Reward Incentives* (使用中汽車排放空氣污染物檢舉及獎勵辦法) was set forth and promulgated on August 18, 1999. To date, this regulation has undergone three revisions and the main alteration made in the current draft revision is the replacement of a monetary reward with a medal, as findings have shown that the main reason citizens report is out of concern for the environment rather than for a reward.

The EPA stated that the goal of this regulation is to encourage citizens to take the initiative to inform local environmental protection

bureaus (EPBs) of illegal conduct whenever they notice an incident of serious exhaust pollution or questionable emissions from diesel vehicles, gas vehicles or motorcycles. The local EPB will then request the owner of the vehicle in question to report to the designated location for testing. If testing shows emissions to be substandard or shows that the offender has not gone in for regular testing as required by law, they will be fined. The informant will then be rewarded by the local EPB.

According to statistics, citizens have reported 84,862 cases of vehicle pollution since the third revision was promulgated in November 2002 up until the end of June. The results of this revision are apparent when comparing this number with

Activity

"Computer Love" Program Donates Used Computers To Remote Areas

To promote the environmental concepts of resource recycling and reuse as well as diminish the disparity between urban and rural areas in terms of digital technology, the EPA and the Institute for Information Industry have jointly launched a "Computer Love" program, which will last till October 31. The plan is to collect donations of used computers from all circles, fix them up and upgrade them, and eventually amass a total of 550 renovated used computers, which will be sent to remote areas, disadvantaged minorities, public welfare or educational organizations. Those interested in donating or would like to inquire about the program can visit the Institute for Information Industry's "Sky Classroom" at <http://www.istec.org.tw> or call the EPA's toll-free number at 0800-085717.

local EPB in carrying out follow-up investigation work. At the same time, a revision to Article 5 adds that in light of the necessity for local EPBs to carry out investigative work, the EPB may send a written notice to either the informant or the suspected offender to provide further explanation.

In the present revision of these incentive regulations, the EPA has given consideration to the informant and the suspected offender by making it convenient and easy to cooperate with the government's environmental protection policy. It is hoped that once this revision goes into effect

it will help achieve the policy outcome of cutting down on air pollution. The draft revision of this regulation has already undergone a public hearing in early July and will be promulgated in the near future.

For more information, please call (02)2311-7722-2780

News Briefs

Soil and Groundwater Remediation Fees Discontinued for Crude Oil

Responding to concerns in the upstream petrochemical industry, on July 8 the EPA announced the new categories and fee rates for chemical substances levies collected as part of soil and groundwater remediation fees. Fee rates collected for crude oil have been canceled from the original rate of NT\$12 per ton. Fee rates for petrol and diesel fuel have both been increased from the original rates of NT\$12 per ton to NT\$22 per ton. The new rates will be effective as of January 1, 2004.

Wastewater Treatment Records for Buildings Must Be Kept for 3 Years

According to the newest regulations announced by the EPA on July 30 this year, in the future, treatment of wastewater from buildings must comply with the *Architecture Law* (建築法). Moreover, prefabricated buildings must be designed to accord with wastewater treatment facilities, and

must receive regular management and cleaning. Designs with uncertain functions are required to undergo management and cleaning at least once or twice per year. Owners of wastewater treatment facilities must keep records on the operation, maintenance, management, and regular cleaning status of the building's wastewater treatment facilities. Such records should be on hand for reference purposes for at least three years. These new regulations will be promulgated on a separate date in the future.

EPA Shuffles High-Ranking Personnel

Following former EPA chief secretary Chen Yeong-ren's transfer to director of the Taipei City Environmental Protection Bureau, the EPA has rearranged some internal personnel positions in July. Former director of the Department of Planning Ni Shih-piao (倪世標) has been promoted to fill the vacant chief secretary position. Other adjustments in personnel are described in detail below:

Name	New title	Former title
Ni Shih-piao (倪世標)	EPA Chief Secretary	Director of the Department of Planning
Tung Te-po (董德波)	Director of the Department of Planning	Director of the Department of Environmental Sanitation and Toxic Substance Management
Ho Soon-ching (何舜琴)	Director of the Department of Environmental Sanitation and Toxic Substance Management	Deputy Director of the Department of Environmental Sanitation and Toxic Substance Management

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