



# Environmental Policy Monthly

Environmental Protection Administration, Taiwan, ROC

Feature Column

## Taiwan-US Cooperation against Vessel Pollution

The "Taiwan-US Vessel Pollution Prevention and Enforcement Plan" has been underway for over one year. Through this plan, Taiwan has sent personnel to the US for training and has invited US officials and experts to Taiwan to share the US' experience in vessel pollution inspection mechanisms and law enforcement. The plan has also supported several cross-ministerial joint inspections in Taiwan's international commercial harbors. Taiwan is now integrating and reviewing related regulations in hopes of fighting vessel pollution through heightened inspection expertise.

As an island nation, Taiwan is keenly aware that any pollution in the ocean can have repercussions on all countries. This makes pollution prevention far more important than emergency response after pollution has already occurred. The ocean environment is shared by all, making it each nation's duty to prevent pollution as well as strengthen cooperation with other countries in preventing marine pollution.

### Learning from US' Experience in Preventing Vessel Pollution

Unidentified pollution incidents in the ocean waters near Taiwan are all too frequent. In an effort to prevent vessels from illegally discharging oily wastewater or otherwise polluting Taiwan's marine environment, the EPA has begun integrating the efforts of agencies related to domestic ocean law enforcement affairs. Part of this task has included

dispatching a diverse delegation of personnel to the US for training in vessel pollution prevention and prosecution. Such exchanges are hoped to lead to further establishment of close cooperation mechanisms with the US in order to effectively stop vessels from illegally discharging oily wastewater. There is currently a lack of comprehensive inspection work among all nations to prevent vessel pollution on a global scale. Although local harbor bureaus under the Ministry of Transportation and Communications (MOTC) currently handle Port State Control inspections and the Coast Guard Administration (CGA) often carries out onboard inspections, these measures are often inadequate in effectively preventing vessels from secretly discharging oily wastewater or other waste as inspection of such incidents involves many international treaties and fields of expertise. Toward this effect, the US has already effectively integrated vessel inspection work among its domestic agencies,

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and initial results have already proved successful. The EPA hopes through training and exchange to draw on the US' experience and through further review of the domestic situation, Taiwan will be well prepared to inspect and prosecute vessel pollution in the future.

Each nation has a different system of authorities responsible for handling marine vessel pollution. In the US, for example, inspections are primarily conducted by Coast Guard personnel, who not only have distinct legal authority but are also fully trained in maritime affairs, vessels, environmental protection and prosecution skills, and capable of independently carrying out inspections. If an inspection reveals suspect signs of pollution, a cooperation mechanism between maritime, environmental and judicial agencies is immediately activated, entailing further inspections, detainment and other legal procedures to determine liability. In Taiwan's case, the Marine Pollution Control Act (海洋污染防治法) involves coast guard, maritime, environmental and judicial authorities in vessel pollution control affairs. The CGA handles enforcement, gathering evidence, and case referral. Environmental protection agencies are the competent authorities for penalizing violations. The Port State Control Official (PSCO) under the Harbor Bureau is responsible for vessels within port boundaries. Criminal cases are handed over to judicial agencies for prosecution. Unlike the US, Taiwan has yet to integrate the jurisdiction of the various involved agencies so as to more effectively carry out pollution prevention work.

Regarding management of vessel pollution discharge, the Marine Pollution Control Act stipulates that: 1) vessels must install pollution prevention equipment and may not pollute the ocean; 2) vessels suspected of polluting the marine environment will be prohibited by the Port State Control Official from moving or starting engines; 3) when necessary the Port State Control Official or executive agency may work with the central competent authority (EPA) to check marine pollution prevention certificates, operating manuals, oil, cargo records and other designated documents of domestic or foreign vessels; 4) all vessel wastewater (effluent), oil, waste or other polluting materials must be stored onboard or discharged into on-land facilities, exempting materials that may be discharged in the ocean according to regulations; 5) appropriate prevention measures should be taken for substances that could pollute the ocean during loading and unloading of vessels. If polluting substances are

illegally discharged into the ocean or if appropriate preventative measures are not taken, violators could face fines ranging from NT\$300,000 to NT\$1,500,000. If falsified records or documents are discovered, the violator could face a jail sentence up to three years, detention, as well as fines from NT\$300,000 to NT\$1,500,000.

### Training of Law Enforcement Personnel Increases Success of Joint Investigations

As inspection of vessel pollution involves many different fields of expertise, the EPA has worked through the Taiwan-US Cooperation Plan to send a delegation of 15 personnel from environmental agencies, judicial agencies, the Harbor Bureau (MOTC) and the CGA to the US for two weeks of training. Among the areas of training included procedures and experience in onboard inspection for pollution. The US Coast Guard and US EPA accompanied Taiwan personnel on board vessels to check pollution prevention equipment and related documents. Moreover, six US judiciary, coast guard and environmental professionals were invited to Taiwan for a week in March to share their experience of successful prosecution of vessels illegally discharging oily wastewater. The US experts also boarded different types of vessels in Keelung and Kaohsiung ports together with judiciary, coast guard, maritime and environmental agency personnel as practical training in joint inspection work among these agencies (Please see EPM April 2007 issue).

Vessel companies or captains sometimes discharge or dump oily wastewater, waste or other polluting substances directly into the ocean to save on



▶ US experts shared their experience of successful prosecution of vessels illegally discharging oily wastewater

operating costs of pollution prevention equipment. In other cases, recordkeeping regulations are not followed when loading vessels or false information is provided on records, constituting criminal behavior. Many of the US' successful vessel pollution prosecution cases involve criminally falsified documents. The US therefore expressly recommended Taiwan's investigation prosecutors attend this practical training. During the training, the US provided several criminal cases in recent years involving prosecution of vessels due to falsified documents. Successful examples were provided for Taiwan's reference and discussion. The Ministry of Justice assigned two prosecutors to engage in in-depth discussion and communication with the US delegation. This exchange will benefit future inspection and prosecution work and ensure more success in prosecuting criminal pollution of the marine environment.



▶ *Taiwan's professionals check pollution prevention equipment and related documents on board vessels in the US*

The EPA points out the primary tasks of vessel pollution inspection are to confirm which vessels are polluting the ocean and to penalize those vessels. The central mission of Taiwan's delegation to the US was thus to learn about US ocean pollution sampling, analysis, tracking, identification of polluters and emergency response mechanisms. Emphasis was especially placed on integrating operations and coordinating the functions of each organization. This will help further complement each organization in strengthening vessel pollution inspection, and will effectively prevent vessels from intentionally polluting the ocean.

Content of the two-week training activities in the US:

1. Law enforcement (inspection techniques and procedures) of vessels illegally discharging oily wastewater and criminal investigation techniques.
2. Environmental forensics of vessels illegally discharging oily wastewater, including pollutants, pollution sites, related documentation and data, identification of polluters and their legal obligations.
3. US EPA's enforcement measures and experience in handling illegal vessel discharges, including procedures for negotiations and settlements for conviction agreements and environmental improvement plans.
4. US integration of regional maritime transport management and civil powers, and establishment of related enforcement and criminal investigation mechanisms based on ocean characteristics, vessel routes and potential pollution.

As for concrete outcomes of training initiatives, in January 2007, the CGA's fourth patrol unit uncovered a Chinese cargo vessel "Weida No. 8" illegally discharging wastewater off the coast of Jiangjun, Tainan County. Putting into practice investigation mechanisms brought back from the US, the CGA first gathered all relevant records and then restrained the vessel from entering the Kaohsiung harbor. Penalties were jointly administered by environmental and maritime agencies. The success of this operation is largely attributed to the training received in the US.

### **Cross-Ministerial Expert Investigation Team Established**

The EPA has coordinated with the MOTC Harbor Bureau, the CGA and judicial agencies several times over the past year to practice joint investigation mechanisms targeting vessel pollution. Random spot checks are conducted at harbors in Keelung, Hualien, Taichung and Kaohsiung. Although these spot checks have yet to uncover vessels illegally discharging pollutants, these efforts have preliminarily established feasible cross-ministerial cooperation investigation models and provided important experience for future reference. In terms of practical implementation, to ensure smooth operation of joint inspection mechanisms to prevent vessel pollution, the EPA has recommended more effort toward the following objectives in the future:

1. Integration and evaluation of relevant regulations: evaluate integration of each agency's existing regulations concerning vessel management; ensure joint inspection operations are carried out according to regulations; recommend revisions to related regulations when necessary.
2. Install professionals in each related agency: integrate domestic environmental, harbor affairs, coast guard and judicial professionals and establish a permanent vessel pollution prevention investigation team. This team can provide immediate response to regular or unscheduled investigation duties and ensure an effective response to vessel pollution.
3. Long-term training of professional talents: To ensure comprehensive functioning of inspection mechanisms for cross-ministerial cooperation, the government should provide professional training to personnel in agencies related to coast guard, maritime, environmental and judicial affairs. This will strengthen professional aptitude and efficacy when carrying out enforcement measures.
4. Careful screening of investigation targets: Prevent pollution by prioritizing spot check inspection targets based on criteria such as poor discharge records in the past or age of vessels.

Working to develop a system for global cooperation in preventing vessel pollution, the US and some other countries have already established a mechanism that jointly assigns personnel at ports for joint inspections. The EPA states that Taiwan will work more actively toward this objective once there is a comprehensive system for Taiwan-US cooperation and exchange in preventing vessel pollution. Through closer international cooperation, Taiwan can more effectively prevent and counter vessel pollution and join global initiatives to protect our precious marine resources and environment.

## General Policy

# Government Encourages Environmentally Friendly Action on Earth Day

At an Executive Yuan meeting just days before Earth Day, Premier Su Tseng-chang said that the government cannot afford to rest for even a day in promoting environmental protection. Soon afterwards the EPA convened a meeting of all departments to discuss the promotion of environmentally friendly actions, hoping that government bodies take the lead in promoting environmental protection in everyday life.

At an Executive Yuan meeting on 18 April 2007 just days before Earth Day, Premier Su Tseng-chang said that the government's work to promote environmental protection cannot rest for even one day. He requested that the EPA and each department must strengthen follow-through on all actions, and appealed to all circles to unite in addressing ecological conservation and environmental protection issues. On 20 April 2007, the EPA requested all central government agencies to promote environmentally friendly actions and expressed hope that governmental bodies can take the lead in putting environmental protection into practice in their daily affairs to reduce harm to the environment.

EPA Minister Chang Kow-lung said that there is still much room for improvement in the public sector in terms of environmental protection. For example, the EPA is taking active measures to gradually reduce its monthly water and electricity consumption, and

has thoroughly implemented office policies requiring printing on both sides of paper documents and banning single-use disposable products such as paper cups. Each EPA department has been asked to strengthen and re-examine policy implementation objectives in accordance with the concluding agreement of the 2006 National Conference on Sustainable Development.

The EPA expressed that the public sector should begin promoting environmentally friendly action in five main areas of "Source Reductions", "Resource Conservation", "Environmental Sanitation", "Green Procurement" and "Educational Outreach." The EPA came up with 44 tasks that can be implemented by government bodies at the present stage. Among them were breakthrough environmental measures such as having each ministry: 1) set annual targets to conserve water and electricity, 2) restrict the use of

single-use disposable items such as paper cups and disposable chopsticks, 3) help promote the "Citizen Mobilization Plan to Clean Up Residential Areas," 4) ensure at least 83% of procurements of products in the designated categories carry the Green Mark ecolabel, and 5) ensure all personnel receive training in the areas of environmental protection, ecological conservation or sustainable development at least once a year.

Minister Chang pointed out that many government

ministries are already promoting environmental protection measures. Chang hopes consensus among ministries will reinforce the promotion of environmentally friendly actions in the public sector and gradually transform administrative practices so that office life adheres more closely to environmental ideals. Staff are encouraged to take the initiative in personally practicing environmental protection, and set examples for everyone in caring for the environment through everyday actions.

## Waste Management

### Construction Waste Controls Expanded from May

In 2006, the EPA launched a trial project in 14 counties and municipalities to recycle plastic bags. Results have been good, and the reuse channels established during this time are operating smoothly. Plastic bag recycling has thus been expanded to all 25 counties and municipalities from 1 April 2007.

In June 2006, the EPA began plans to gradually expand the scope of regulatory controls on construction industry waste. It took half a year to finish consultation and negotiation of preliminary terms with all the concerned authorities and industry associations. The second and third phase waste control schemes were announced on 27 February 2007.

The criteria for the second phase expansion of construction industry categories came into effect on 1 May 2007. This phase will regulate construction projects occupying a total area of over 1,000 square meters or those worth over NT\$10 million, and demolition projects. The third phase, effective from 1 August 2007, will regulate construction projects over 500 square meters or worth NT\$5 million, and demolition projects. It should be noted that for the newly added category "demolition industry" (not in the same category as the construction industry), contractors that have obtained demolition permits must abide by the relevant regulations and begin paying air pollution control fees from 1 May 2007.

From August 2005 to March 2007, implementation of the phase one expansion of regulated construction

industry categories already covers 10% of construction projects (around 5,000 sites) required to pay air pollution control fees. Over the last 20 months, one million tonnes of construction waste has been reported, and 70% of this volume underwent sorting and recycling. After this initial success, the EPA expanded the scope of regulation by introducing the second and third phase control measures, effective 1 May 2007 and 1 August 2007, respectively. These two phases are expected to increase the number of controlled project sites by 10,000 and the volume of reported waste by 1.2 million tonnes per year from 2008.

The EPA points out that while some construction companies have been required to report industrial waste control measures online since August 2005, a large number of the nation's 10,000 construction companies and civil engineering contractors are still unfamiliar with online reporting. Therefore, as was done before promulgation of the first phase, the EPA has arranged a series of briefings around Taiwan from April 2007 to familiarize the newly targeted construction companies with related regulations and online reporting procedures.

## Air Quality

### Waste Oil to Biodiesel - All Waste Cooking Oil to Be Recycled from September

Waste cooking oil collected for recycling is most commonly used to make soap. Other countries have already been producing and using biodiesel for many years. Considering a shortage of energy resources has fueled an urgent need to develop alternative energy sources, the conversion of waste cooking oil into biodiesel is a new

trend for the future. Moreover, production and use of biodiesel could result in the environmental benefits of both reducing carbon dioxide emissions and improving air pollution. Some counties and municipalities have already begun experimenting the use of biodiesel fuel in garbage trucks.

The EPA indicates that according to survey results, Taiwan generates around 70,000 to 85,000 tonnes of waste cooking oil annually, amongst which 72-80% is produced by the fast food industry, food processing factories and the food and beverage industry. The remaining 20-28% is generated by households, schools or government agencies. Waste cooking oil is collected for recycling by individuals, clearance organisations, and organic waste collectors. End products include animal feed additives, soap, and biodiesel. Some waste cooking oil, however, is mixed with kitchen waste, absorbed into paper towels or dumped into sewers.

Last year the EPA and Chiayi County jointly sponsored the "Waste Cooking Oil Recycling Plan." From 1 May 2006 to the end of December 2006, approximately 6.66 tonnes of waste cooking oil was



▶ In 2006, 6.66 tonnes of waste cooking oil was collected and recycled into biodiesel by the Chiayi County EPB

collected and recycled into biodiesel by the Chiayi County Environmental Protection Bureau. This constitutes approximately 15% of this county's waste cooking oil; the remaining oil was distributed to other recycling enterprises along with subsidies to assist in recycling this resource.

After reviewing the results of Chiayi County's implementation of the "Waste Cooking Oil Recycling Plan," the EPA drew up plans to comprehensively promote the recycling and reuse of waste cooking oil. Every department, county or municipal government was asked to thoroughly survey the quantity and flow of waste cooking oil from all the institutions and schools under their jurisdiction. Reuse is also required of waste cooking oil sold by tender to the recycling industry. Citizens can also give used or expired cooking oil to sanitation crews for recycling into raw materials to produce biodiesel, animal feed, soap and stearic acid. The large quantities of waste cooking oil generated by industries can be consigned to recycling companies for recycling. The EPA will also require certain industries such as the food production industry and fast food industry to report online the quantity and flow of waste cooking oil produced.

The EPA indicates that promotional activities for this initial stage will begin from September 2007, so that by June next year, around 4,600 tonnes of waste cooking oil can be recycled. Although domestic sources account for only a small portion of the overall quantity of waste cooking oil, once citizens have developed the habit of separating their waste, the nation will be one step closer to increasing the recycling of reusable, valuable resources and attaining sustainable use of resources.

## Recycling

### Recycling and Treatment Fees Increased for Containers with PVC Accessories

In order to achieve Zero Waste goals and total sorting of all waste container products, the EPA is revising recycling, clearance and treatment fees for designated containers. The additional fee for recycling, clearance and treatment of containers with PVC accessories will be increased from 30% to 100%.

Aspiring toward complete sorting and Zero Waste goals, the EPA is revising recycling, clearance and treatment fees for designated containers to encourage environmentally preferable container

design and the use of environmentally friendly packaging materials. From 1 September 2007, the additional fee rate for recycling, clearance and treatment of container products containing PVC

accessories will increase from 30% to 100%.

Vinyl chloride monomer (VCM), a confirmed carcinogen, is released when PVC products are incompletely polymerised, resulting in the production of dioxins at the time of incineration. For this reason developed countries have restricted use or voluntary control measures targeting PVC products. In the interest of safeguarding public health and environmental quality, the EPA began requiring payment of recycling, clearance and treatment fees for container additives since the 31 December 2004 announcement of Fee Rates for the Recycling, Clearance and Treatment of Items and Containers (物品及容器回收清除處理費費率). Those manufacturing containers with PVC accessories were initially required to pay a 30% additional fee as a measure to encourage adoption of environmentally safer substitute materials.

The EPA indicates that the present range of additional fees does not provide enough incentive for industries to change to other environmentally preferable substitute materials. Taking into consideration the continuance of the PVC control policy as well as the time it will take for industries to change their operations in response to this policy, the EPA has decided to increase the additional fees for the recycling, clearance and treatment of container products with PVC accessories from the original 30%

to 100%. The new rates will come into effect from 1 September 2007 as a measure to further reduce the production of containers with PVC accessories.

The draft revision of this fee rate can be found in the preannouncement section of the EPA's website (<http://w3.epa.gov.tw/epalaw>). The EPA welcomes recommendations from all circles regarding this revision.



▶ *The additional fee of containers with PVC accessories will be increased to 100%*

## Waste Management

### Draft Revisions to Transboundary Waste Regulations Open to Public Comment

Staying true to the Basel Convention, the EPA made a preannouncement of draft revisions to the Management Regulations for the Import, Export, Transit and Transshipment of Waste. The focus of revisions includes new regulations that prioritize domestic treatment of waste over exporting waste for treatment. The exception to this rule concerns nations with which Taiwan has signed bilateral treaties on waste import and export; the terms in these agreements shall receive ultimate priority.

**T**he EPA made a preannouncement on 20 April 2007 of draft revisions to the Management Regulations for the Import, Export, Transit and Transshipment of Waste (廢棄物輸入輸出過境轉口管理辦法). The proposed revisions help Taiwan adhere to the Basel Convention by putting into practice the principle of treating waste domestically, and ensuring appropriate treatment of the small percentage of waste that cannot be treated in Taiwan. Details are posted in the ordinance preannouncement section of the EPA's website (<http://w3.epa.gov.tw/epalaw>).

The focus of revisions is explained below:

1. Priority is placed on treatment of waste within Taiwan. Waste may be considered for treatment abroad only when there is a lack of reuse or treatment technology, or insufficient treatment facilities or capacity. These criteria are in accordance with the Basel Convention.
2. Applications for export permits should include an additional document to certify that the enterprise entrusting clearance and treatment of waste has conducted a public bidding process yet is unable

- to find appropriate treatment and reuse of the said waste within Taiwan. Additional required documents include a report by the applicant verifying that personnel have visited the treatment plant in the recipient nation to conduct an onsite inspection of treatment capacity and operating conditions, and a document signed by the applicant and the recipient enterprise to guarantee truthful content of the abovementioned report. These documents ensure waste that cannot be treated in Taiwan indeed receive appropriate treatment after export.
3. A newly added regulation stipulates conditions under which the competent authority may overrule application documents. This measure guarantees applicants bear responsibility for accurate content of additional documents, and raises the efficiency of application review.
  4. Revisions specify that regardless of the priority on domestic treatment of waste, ultimate priority shall be given to the terms of bilateral agreements with other countries regarding the handling of exported/

imported waste.

5. New regulations stipulate that enterprises shall apply with the EPA on a case-by-case basis for permits to import/export waste samples for academic research or research and development of related clearance and treatment technology.

The EPA indicates the future direction of waste export/import management will complement the policy to merge the Waste Disposal Act (廢棄物清理法) and the Resource Recycling Act (資源回收再利用法) by restricting or prohibiting the export of waste when the capacity for domestic treatment of waste already exists. When domestic resource recycling and management facilities have extra capacity, permission will be granted to import waste for reuse and recycling, provided there is sufficient value in recycling the said resource. If Taiwan lacks the ability to treat a given waste, it must export the waste for treatment; export of such waste is limited to developed nations.

## Recycling

### Higher Recovery Rates Planned for Scrap Vehicle Recycling Subsidies

On 1 July 2007, the EPA is planning on increasing the standard ratios of resources recovered from shredded and sorted scrap vehicles in regard to eligibility for different subsidy fee rates. A public hearing on these modifications was held on 30 April 2007.

Formerly, automobile shredder residue (ASR) treatment costs set the standard for shredding and sorting subsidies. The EPA modified this scheme on 1 November 2006 in order to increase the ratio of resources recovered by scrap automobile shredding plants. Since then, subsidy rates have been based on the ratio of resources recovered after shredding



and sorting. Under the new scheme, NT\$3,800/tonne is allocated for a 75%~100% resource recovery rate, NT\$3,400/tonne is allocated for a 70%~75% recovery rate (not including 75%), NT\$3,000/tonne is allocated for a 65%~70% recovery rate (not including 70%), and no subsidies are given for recovery rates below 65% (not including 65%). Another change was made to the certified volumes for subsidy rate calculation standards, which used to be based on the weight of the "scrap vehicle exterior" (including scrap steel, non-steel metals, ASR, etc.). Certified volumes are now based on the weight of scrap steel after shredding and sorting treatment (not including non-steel metals or ASR). This measure was adopted to encourage enterprises to voluntarily reduce the amount of waste, enhance reuse efficiency and reduce ASR treatment costs. Since implementation of this measure, the ratio of reusable resources has markedly increased, greatly benefiting the downstream reuse of scrap automobile waste.



Looking for other ways to encourage end-of-life vehicle treatment plants to reuse resources, the EPA is planning to raise the resource recovery rate standards for subsidization from 1 July 2007. Under this revised scheme, NT\$3,800/tonne is allocated for a 80%~100% resource recovery rate, NT\$3,400/tonne is allocated for a 75%~80% recovery rate (not including 80%), NT\$3,000/tonne is allocated for a 70%~75% recovery rate (not including 75%), and no subsidies are given for recovery rates below 70% (not including

70%). A further restriction stipulates that if the ratio of shredded steel exceeds 75%, then steel shall not be included in the calculations of either certified volumes for subsidies or resource recovery ratios. This measure should encourage enterprises to take extra steps to recover resources from ASR.

A chart on subsidy rates for dismantling, shredding, sorting and recycling of scrap automobiles is available for download from the EPA's recycling website (<http://recycle.epa.gov.tw/>).

## Waste Management

### Online Reporting of Industrial Waste Now More Convenient

Striving to provide comprehensive and convenient e-services and ensure data security when companies file industrial waste reports, the EPA has adopted the Ministry of the Interior's Natural Person Digital Certificate application system, which will enable companies to review reporting profiles and improve self-management.

To effectively track the flow of industrial waste, the EPA's Industrial Waste Control Center introduced an online report system, which requires about 20,000 companies to report the generation and flow of industrial waste. Over 97% of these companies are already using this system. In addition, the EPA currently possesses baseline data of 50,000 businesses. With the digitalization of this data, the system will process auditing and matching to identify excess waste volumes or illegal handling of waste. Legal actions are taken against violators once found. In August 2006, the Industrial Waste Control Center added two functions to the e-management service area of its website, providing information about waste generation and statistics on failure to report by deadlines. The waste generation enquiry function enables companies to view and cross-calculate their entries of reported volume, actual clearance and treatment volume, clearance and treatment planning report. The webpage also displays a reminder of any missing or nonstandard reports. The second function

indicates entries that fail to meet statutory deadlines, for which penalties are given. Both functions are designed to help companies avoid erroneous filing, which could lead to penalties. Since August 2006, this section of the online report website saw around 57,000 visits that took advantage of these services. More added-value features will be successively developed into the e-management service area to address enterprise inquiries in the future.

The Center incorporated the MOI's Natural Person Digital Certificate system to strengthen data security control and ensure confidentiality of information submitted by industry organizations to the e-management service area. This identity verification mechanism effectively prevents leaks of classified information. Effective from 1 April this year, companies logging in with their original number and password can only gain access to basic report functions and will require a Natural Person Digital Certificate to access the e-management service area, where basic report functions are available as well.

## Toxic Substance Management

### Taiwan Keeps Up With International Controls on POPs

The third Conference of the Parties to the Stockholm Convention on Persistent Organic Pollutants (POPs COP-3) was held during the week of 30 April 2007, in Dakar, Senegal. The EPA sent a delegation to participate in the meeting as an NGO.

The main issues discussed during the third Conference of the Parties to the Stockholm Convention on Persistent Organic Pollutants (POPs COP-3) on 30 April 2007 included continued use of DDT to control disease vectors and alternative strategies to replace DDT; review and discussion of designated substances exempt from registration; and sharing of experience in drafting national implementation plans. Another item concerned the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, brought to attention by a report submitted on the issue of POPs waste management. Related discussion attested that this issue is receiving emphasis in the international arena.

The EPA states that while Taiwan is not a signatory nation, it is squarely facing the potential risks of POPs on the environment and human health. Taiwan has

not only issued full-scale controls on POPs pollution but has cooperated with the agricultural and health agencies to join forces in emergency response to related pollution incidents.

With the President's promulgation of revisions to the Toxic Chemical Substance Control Act (毒性化學物質管理法) on 3 January 2007, the EPA is now drafting revisions to related bylaws. There are now 256 types of toxic chemical substances under regulation. It is the job of environmental agencies at all levels of government to manage the handling of these substances according to regulations. In light of the far-reaching impact that toxic chemical substances have on the world today, the EPA's toxics control strategies have incorporated international development trends to appropriately control POPs at their source and minimize the risk of dangerous pollution.

## Environmental Complaints

# Noise and Odor Make Up Over Half of Environmental Complaints

According to statistics compiled by the EPA, the most common public nuisance complaints involve noise and odor, accounting for 30% and 23% of complaints, respectively. Twenty-two percent of complaints are filed at night, showing an increase compared to the previous year. Analysis by region reveals 40% of cases are filed in Taipei City and Taipei County.

A statistical analysis report on public nuisance complaints in 2006 was issued by the EPA on 26 April 2007. A total of 131,850 complaints were received in 2006 by environmental protection agencies island-wide. Among them, "noise" (30%) and "odor" (23%) make up over half of complaints, mainly because these types of pollution have a great impact on the senses and people's perception of quality of life. The third and fourth most frequent complaints involve "environmental hygiene" and "waste." Approximately 22% of all complaints are filed at night from 6:00pm to 6:00am, and most complaints concern noise and odors, indicating that noise and odors are the most significant problems affecting quality of life in residential settings.

According to the EPA's analysis, an average of 58 public nuisance complaints were filed among every 10,000 people in the year 2006. Of all the cities and counties, Taipei City had the highest frequency of complaints at 119 complaints filed per 10,000 people. Moreover, Taipei City and Taipei County were the top two in terms of numbers of complaints, occupying nearly 40% of all complaints nationwide. These statistics suggest that people in Taipei City are more

sensitive to environmental nuisances due to stronger expectations toward quality of life.

In terms of targets of complaints, the top four nuisances are "citizens," "industry/factories," "commercial activities," and "construction projects." Further analysis shows that "citizens" are targets of complaints concerning environment hygiene and waste, "industry/factories" are targets of odor complaints, while "commercial activities" and "construction projects" are common targets of noise complaints. These are the environmental problems that people in Taiwan are generally most concerned about.

The EPA has established diverse complaint filing services in recent years. In addition to a round-the-clock toll-free hotline (0800-066666), two other channels are open for complaints: the online filing system (<http://ww3.epa.gov.tw/>) or the Minister's email box (<http://www.epa.gov.tw/>). In 2006, a majority (84%) of complaints were filed by phone, showing that the telephone is still the most common method of complaint. However, in recent years, there have been more and more instances of online complaint filing (including emails) with 11% of complaints filed online

in 2006. The fact that a higher percentage of internet filing takes place at night or during holidays proves that online services provide a convenient option for many people.

## Air Quality

# Worsening Transboundary Air Pollution Spurs International Monitoring Cooperation

According to EPA statistics, exposure to high concentrations of PM<sub>10</sub> suspended particulate matter has increased from 10% to 41%, indicating a worsening trend for transboundary transport of environmental pollutants. Taiwan's geographic location is under direct influence of foreign pollutants, making it all the more necessary for Taiwan to monitor air quality in collaboration with other countries.

**B**ased on data collected during the northeast monsoon season (October to April the next year) over the past three years, the EPA has classified four types of long-range transported pollution from overseas sources based on PM<sub>10</sub> or SO<sub>2</sub> concentrations:

(1) Background: characterized by low concentration of PM<sub>10</sub> and pollutants, indicating good background air quality.

(2) Suspended matter: PM<sub>10</sub> concentration > 150µg/m<sup>3</sup>, SO<sub>2</sub> concentration < 8 ppb, indicating long-range transported air pollutants are mainly suspended dust.

(3) Pollution: PM<sub>10</sub> concentration < 150µg/m<sup>3</sup>, SO<sub>2</sub> concentration > 8 ppb, indicating long-range transported air pollutants are mainly industrial emissions.

(4) Mixed: PM<sub>10</sub> concentration > 150µg/m<sup>3</sup>, SO<sub>2</sub> concentration > 8ppb, indicating long-range transported air pollutants are a mixture of suspended dust and industrial emissions.

EPA statistics show that during the northeast monsoon season over the last three years, there have been 30, 30 and 32 exposure incidents, respectively. The incidence rate of the background type of long-range transported air pollutants decreased from 63% in

2005 to 50% in 2007, meaning a lower rate of good background air quality. In contrast, the incidence rate of mixed matter increased from 7% to 35%. The incidence of high concentrations of PM<sub>10</sub> (mixed matter and suspended dust combined) increased from 10% to 41%, while industrial emissions (mixed matter and pollution combined) increased from 34% to 44%, meaning that air pollution from overseas sources is increasingly affecting domestic air quality.

The EPA points out that long-range transport of pollutants from overseas sources such as dust storms in East Asia and biomass burning in Southeast Asia has become a serious problem in recent years. Situated in the direct pathway of airborne pollutants and their effects, it behooves Taiwan to closely monitor the situation. In 2006, the Taiwan EPA participated in an international monitoring network in collaboration with USEPA, NASA (National Aeronautics and Space Administration) and NOAA (National Oceanic and Atmospheric Administration), and set up an international standard background air quality monitoring station on Mt. Lulin to monitor transboundary movement of air pollutants. These efforts will help understand the nature of transported pollutants and how they affect air quality in Taiwan.



*Air quality characteristics during northeast monsoon season over the past three years:*

Category of air pollution	Background			Suspended matter			Pollution			Mixed		
	<sup>1</sup> SO <sub>2</sub> (ppb)	<sup>1</sup> PM <sub>10</sub> (µg/m <sup>3</sup> )	<sup>2</sup> Incidence rate (%)	<sup>1</sup> SO <sub>2</sub> (ppb)	<sup>1</sup> PM <sub>10</sub> (µg/m <sup>3</sup> )	<sup>2</sup> Incidence rate (%)	<sup>1</sup> SO <sub>2</sub> (ppb)	<sup>1</sup> PM <sub>10</sub> (µg/m <sup>3</sup> )	<sup>2</sup> Incidence rate (%)	<sup>1</sup> SO <sub>2</sub> (ppb)	<sup>1</sup> PM <sub>10</sub> (µg/m <sup>3</sup> )	<sup>2</sup> Incidence rate (%)
10/2004-4/2005 (30 incidents)	1.8	44	<b>63%</b>	2.9	115	<b>3%</b>	6.8	85	<b>27%</b>	7.0	116	<b>7%</b>
10/2005-4/2006 (30 incidents)	1.6	46	<b>57%</b>	2.9	121	<b>10%</b>	6.3	74	<b>23%</b>	10.1	141	<b>10%</b>
10/2006-4/2007 (32 incidents)	1.6	57	<b>50%</b>	2.1	162	<b>6%</b>	6.6	92	<b>9%</b>	8.4	146	<b>35%</b>

<sup>1</sup>Concentration of SO<sub>2</sub> (ppb) and PM<sub>10</sub> (µg/m<sup>3</sup>) air pollution during northeast monsoon season of greatest impact

<sup>2</sup>Total occurrences of all categories of air pollution divided by occurrences of specific category of air pollution during that year

## News Briefs

### Rewards Decreased for Turning in End-of-Life Vehicles

With a sound system in place for recycling end-of-life vehicles, over 80% of end-of-life vehicles in Taiwan are completely recycled. On 30 April 2007, the EPA announced that from 1 July 2007 the reward for turning in end-of-life vehicles will be reduced to NT\$1,000 for automobiles and to NT\$300 for motorbikes. A public hearing was held on 4 April 2007 to brief administrative procedures for this revision. According to the EPA, an increasing percentage of citizens are turning in end-of-life vehicles on their own initiative. As targeted recycling rates have already been attained, the reward system can be scaled down and return to free market mechanisms.

### Revisions Finalized on Requirement for Recyclers to Keep Transaction Records

On 26 April 2007, the EPA finalized revisions to regulations that aim to prevent recycling and treatment enterprises from becoming channels for the illegal trade of stolen goods. The revision requires enterprises to record daily recycling, clearance and treatment of items designated by the EPA including electric cables, steel doors and sewer caps, as a measure to control the flow of these items. Registry data should be kept for five years and made available to related agencies for inspection. The revised regulation is available for download from the website (<http://w3.epa.gov.tw/epalaw/index.aspx>).

### Performance Evaluation of Local Environmental Agencies

### Announced

According to the results of the 2006 performance evaluation for local environmental agencies, environmental protection bureaus (EPBs) of Taipei City, Kaohsiung City, Taichung City, Hsinchu County, Taichung County, Nantou County, Yilan County and Hualien County were ranked as having best overall performance. EPA Minister Chang Kow-lung personally conferred awards to each EPB as a measure of encouragement. EPBs of the remaining localities were ranked as having good performance.

### Environmental Merit Awards Granted to Volunteers and Organizations

On 19 April 2007, the EPA held the "2006 Individual and Organization Environmental Merit Award Ceremony" and the "15th National Environmental Model Community Award Ceremony." Awards were conferred in three categories to 49 recipients. This year's selection of model communities chose from 18 communities around Taiwan, with first-place awards given to Mao-ao Community in Gongliao Township, Taipei County; Nanshih Community in Lugang Township, Changhua County; and San-jhan Community in Hsioulin Township, Hualien County. Five second-place awards and ten third-place awards were conferred. These communities excelled in utilizing free resources and integrating the skills of community residents to protect the environment. Apart from this, a total of 12 organizations received awards for making contributions toward environmental protection, with three

first-place awards granted to Taiwan Field Studies Association, Tainan Ecotour Development Association, and Shenwei Packaging Design Co. Ltd. Three second place awards and six third-place awards were conferred for integrating with community efforts to promptly put environmental protection policies into practice.

### Minister and Celebrities Sound Warning on Global Warming

On the eve of Earth Day, the EPA cooperated with the National Geographic Channel for the first time to sponsor an internet activity entitled "Global Warming – Taiwan Is Running a Fever." Two participatory activities were featured, "Global Warming Environmental English Test" and "Global Warming—Breaking the Fever," to convey the seriousness of climate change, expand people's world view, and raise awareness of global warming issues. Those able to pass the environmental English test were issued the grand prize – "A Trip to the Amazon Rainforest, Lungs of the Earth." Winners have the opportunity to visit the Amazon rainforest and learn firsthand about how the world's largest and most precious rainforest is disappearing. EPA Minister Chang joined National Geographic's outreach activities to become Taiwan's first spokesperson on this channel. The popular Taiwan celebrity group, the "Lollipops," also joined the event as environmental ambassadors, calling on the public to squarely face the issue of global warming. Details of this activity can be found online at [www.ngc.com.tw](http://www.ngc.com.tw).

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