



Environmental Policy Monthly

Environmental Protection Administration, Taiwan, ROC

Volume IX, Issue 8

August, 2006

Feature Column

Industrial Water Pollution Control: Current Status and Policy

The EPA is currently revamping regulations related to the *Water Pollution Control Act* in response to difficulties implementing industrial water pollution controls. Revisions include expanding the scope of targets subject to the *Water Pollution Control Act*, drafting a comprehensive system and regulations for the *Water Pollution Control Act*, drafting the *Regulations Governing the Water Pollution Control Measure Plans and Permit Application Review* and the *Regulations Governing Water Pollution Control Measures and Monitoring Reports*, as well as modifying the *Soil Treatment Standards*.

Past and Future Challenges of Industrial Water Pollution Control

Taiwan's first water pollution control policy began with the promulgation of the *Water Pollution Control Act* (水污染防治法) on 11 July 1974. Thirteen years later, the EPA took over management of water pollution control work upon its establishment in 1987. Since then control methods have primarily relied on enforced inspections. By the 1990s, systems had been established for watershed management and related permits, monitoring reports, investigation, guidance, certification by qualified engineers, and hiring of specialists to ensure sound control strategies for industrial wastewater. With these systems in place, the next step required building a database to complement the new e-government system. This database now keeps track of industrial effluent permits, reports and control information of over 16,000 enterprises. All information in the database, including permit information application and control information, is accessible through a search function to ensure effective management.

1993 to 85.3% in 2005, attesting that controls have pushed industry to take pollution control seriously. As for effectiveness of industrial wastewater management, most companies have already installed wastewater treatment facilities and 95% of all types of industries, including factories and agricultural industries involving livestock effluent, now employ industrial wastewater specialists or organizations.

At present there are still some industries that attempt to save on operating costs by operating wastewater treatment facilities only part of the time while secretly discharging wastewater into the environment. This is currently the biggest challenge in industrial wastewater management. Addressing this problem, the EPA has set out to make major revisions to related regulations this year (2006). To minimize the impact of over 10,000 existing enterprises throughout Taiwan, the EPA will organize a special guidance taskforce to work with industries on making gradual improvements over the next three years.

Expanding Control Targets and Building a Sound Regulatory System

In the 2005 announcement of the

In This Issue	
Feature Column: Industrial Water Pollution Control: Current Status and Policy.....	1
Self-Management at Gas Stations to Prevent Groundwater Pollution.....	4
EPA Launches New Environmental Regulation E-Bulletin.....	5
Government Shows Excellent Green Procurement Performance in 2005.....	5
Stricter Emission Standards to Reduce Odor Pollution.....	6
Toxic Chemical Substance Management Tightened.....	7
Recycling and Treatment Firms Must Reregister Every Five Years.....	8
Single Portal for Reporting Air, Water, Waste, and Toxics Underway..	9
Recycling Organizations and Individuals Awarded for Top Performance.....	9
News Briefs.....	9
Activity.....	8

Categories and Definitions of Industries Subject to Water Pollution Controls, ten new industry categories were added including hot springs enterprises, petroleum storage facilities, enterprises that store or pile designated materials, veterinary hospitals, government organization laboratories and construction sites. This was done to solve the pollution sources involving effluent from hot springs enterprises, leaky petroleum storage tanks, storage of hazardous substances, and wastewater containing blood and infectious microbes.

To strengthen protection of water source quality, the EPA stipulates that 15 industries—food manufacturers, vehicle repair shops, entertainment premises, laundry services, livestock industry, aquaculture industry, hospitals and medical organizations, food and beverage enterprises or tourism hotels—located in drinking water source quality protection areas are all subject to the same water volume criteria of 10 cubic meters per day or above. This measure is provided to prevent some industries from slipping under the threshold for wastewater controls. Moreover, for small-scale businesses with low volumes of wastewater but high concentrations of pollutants, apart from criteria for water quality and quantity, other special criteria have been added based on type of enterprise including number of seats, number of guest rooms, number of livestock, area, number of beds, or nature of pollutants.

In 2006, the EPA began to make the water pollution control system more comprehensive through revisions that enhance the function of water pollution control measure audits, put an end to illegal discharge of wastewater, and streamline permit application procedures. After reviewing the current situation, three regulations have



most companies have already installed wastewater treatment facilities

been integrated: *Regulations Governing Water Pollution Control Measure Plans and Permit Application Review* (水措計劃及許可申請審查辦法), *Regulations Governing Water Pollution Control Measures and Monitoring Reports* (水措及檢測申報管理辦法), and *Soil Treatment Standards* (土壤處理標準). Moreover, it has been established that wastewater transported via pipes and ditches will be regulated under the *Water Pollution Control Act*. For those transporting wastewater in containers or tank carriers for offsite treatment, transport and follow-up treatment will be regulated under the *Waste Disposal Act* (廢棄物清理法).

Integrating Water Pollution Control Permit Regulations

According to the *Water Pollution Control Act*, enterprises must obtain permits showing approval of Water Pollution Control Measure Plans, or discharge, storage, or dilution of wastewater before they engage in such conduct. To strengthen the function of permit reviews and to streamline permit procedures, further integration of the *Regulations Governing Water Pollution Control Measure Plans and Permit Application Review* has been carried out in the following modifications:

To ensure enterprises fully understand application procedures the permit review process has been

divided into three stages: 1) establishment of facilities, 2) before operations, and 3) commencement of operations. Concrete regulations are established to fortify the permit review system and ensure enterprises pay full attention to the operation of wastewater treatment facilities.

Apart from stipulating onsite investigations, application review mechanisms are further strengthened by inviting experts or scholars to participate in inspections, especially in cases where companies report wastewater recovery rates to exceed 90%. The revision also stipulates appraisal principles based on the nature of water pollution control measures. For example, the maximum volume allowed for new factories may not exceed 80% of the initial designed volume. Finally, if enterprises are ordered to halt operations due to serious pollution, they must install automatic water quality monitoring equipment and video surveillance systems to oversee regular operation of equipment.

To streamline government and provide more convenience to citizens, the revised version simplifies many procedures and adopts a single permit system. For example, when a water pollution control project adopts measures not under the scope of originally approved items, approval for those newly adopted measures can be applied for at the end of construction. Moreover, restrictions have been relaxed for some companies, allowing them to

apply for simple discharge permits. Since permits are authorized by professional engineers, original test-run requirements have been deleted and all applications not involving functional aspects are exempt from further authorization by a technician. This revision thus takes into consideration emergency situations by allowing immediate response without applying for a permit. Finally, all applications can be handled over the Internet to further facilitate integration of the environmental permit system.

Strengthening Water Pollution Management and Monitoring Reports

Monitoring reports are an important method of self-management for sewerage systems and businesses subject to *Water Pollution Control Act* regulations. To strengthen management of water pollution control measure standards and report content and to ensure control after permits have been issued, the EPA has drafted the *Regulations Governing Water Pollution Control Measures and Monitoring Reports*, the highlights of which are described below:

Firstly, enterprises are required to adopt runoff wastewater prevention and management measures to prevent various industrial materials in the surrounding environment from mixing with rainwater and contaminating water bodies due to lack of appropriate treatment. Penalties will be issued for operation of facilities for which operating parameters have not yet been approved.

In terms of soil treatment, industries allowed to discharge wastewater in soil must install equipment that separates solids from liquids. When treating diluted wastewater, companies must confirm that the diluted solution is thoroughly mixed in one container. Businesses that

have suspended or shut down operations shall properly treat any remaining wastewater to prevent extra wastewater from overflowing and contaminating water bodies. Recovered wastewater used in other waste prevention equipment need not conform to effluent standards. The revision also stipulates that other parties commissioned to handle wastewater treatment measures shall be held liable for following rules and regulations.

Parties contracted for treatment must first obtain permission to handle excess volume. Contractors incapable of handling the entrusted volume of waste for over 30 days shall discontinue their treatment contract. To facilitate emergency response by industries, regulations specify sufficient storage capacity for storing wastewater. Receptacles must be properly labeled and containment conditions must be reported daily for reference. Personnel responsible for reporting must report the previous half-year of data every six months.

Soil Treatment Regulations Revised

The *Water Pollution Control Act* stipulates that a party must first obtain a permit for soil treatment and comply with *Soil Treatment Standards* before discharging wastewater into soil. The revisions have further relocated original standards on control methods, monitoring and reporting to the *Regulations Governing Water Pollution Control Measures and Monitoring Reports*. Permits for original soil standards have also been revised to accord with the *Regulations on Water Pollution Control Measure Plans and Permit Application Review*.

The revision stipulates that livestock operations, zoos, sugar manufacturers, and public sewer-

age systems shall use pipes or channels to transport wastewater. Those permitted to discharge wastewater into soil shall do so according to *Soil Treatment Standards*. In keeping with the essence of source control and total quantity control, maximum allowable numbers of pigs and cattle are stipulated per hectare of land. As soil treatment cannot be done during the rainy season, those required to discharge wastewater in soil shall apply for and obtain a permit for either surface discharge, storage or dilution of wastewater.

Future Prospects

The future focus of industrial wastewater management involves encouraging wastewater recovery and reuse based on water resource reuse policy, strengthening management of pollution sources, stipulating management of runoff wastewater equipment and separate management of hot springs wastewater, strengthening management of illegally discharged wastewater, installation and management of monitoring facilities, reinforcing management and function assessment mechanisms of wastewater operation parameters, collecting water pollution prevention fees, and raising economic incentives to curtail effluent volume.

The EPA continually reviews its past experience in water pollution prevention as it works to create an integrated management program. To complement industry structural adjustment and promote environmental protection concepts, the EPA will reinforce pollution prevention, total quantity control, honest reporting and self-management to achieve the goal of sustainable operations.

Soil and Groundwater Pollution

Self-Management at Gas Stations to Prevent Groundwater Pollution

The EPA promulgated the *Regulations Governing the Installation of Groundwater Pollution Prevention Facilities and Monitoring Equipment at Gas Stations* on 4 July 2006. This regulation initiates more proactive and effective source management at gas stations to prevent substances in underground storage tanks from leaking and causing soil and groundwater pollution. Gas stations are expected to incorporate pollution prevention concepts into everyday self-management practices to effectively reduce the occurrence of pollution.

On 18 December 2002 the EPA promulgated the *Regulations Governing the Installation of Groundwater Pollution Prevention Facilities and Monitoring Equipment* (防止污染地下水體設施及監測設備設置管理辦法) to strengthen management of underground storage tank systems and prevent leakage of hazardous substances. In order to ensure more effective source management, the EPA has integrated substantial measures and drafted standard operating procedures for necessary mechanisms and monitoring work in the *Regulations Governing the Installation of Groundwater Pollution Prevention Facilities and Monitoring Equipment at Gas Stations* (加油站防止污染地下水體設施及監測設備設置管理辦法) promulgated on 4 July 2006. This revision is expected to effectively reduce the occurrence of pollution by inducing gas stations to incorporate pollution prevention concepts into regular self-management practices.

The focus of this revision specifies deadlines in which environmental agencies shall require underground storage system owners to build and renovate facilities. Considering that the main source of contamination due to leakage is from pipelines leading to and from gas stations and underground storage systems, the revisions require installation of leak prevention measures which are to be monitored daily. Before this revision is implemented gas stations that have obtained building permits

and have completely established facilities have been notified to install leak-prevention equipment underneath filling tanks and add monitoring equipment near pipelines and pump islands within one year from the implementation of this revision. All personnel responsible for monitoring work must pass central government training qualifications. Monitoring parameters have also been specified in the revisions along with monitoring methods and report frequency. Auditing mechanisms for new monitoring methods have been made available to help reach pollution prevention goals.

To better suit actual circumstances, it has been added that facilities may be exempt from regular monitoring work if secondary cut-off levels and above-ground pipes are installed,

as these measures effectively prevent and reduce the occurrence of pollution. The revisions also establish a notification mechanism when changes are made or leaks occur in underground storage systems. To prevent the occurrence or spread of pollution, all companies should carry out necessary inspections and monitoring work, the results of which should be recorded and submitted to authorities. Online reporting will officially commence from 1 January 2007 to streamline monitoring record report and verification procedures and fully institute the online report system. Online reporting will assist gas stations in conducting careful management of oil stocks, carrying out regular monitoring work and reducing management costs to attain effective pollution prevention at the source.



Self-management at gas stations can help reduce pollution

Comprehensive Planning

EPA Launches New Environmental Regulation E - Bulletin

The EPA has initiated the "New Environmental Regulation E-Bulletin" online subscription news bulletin to provide concerned citizens with the latest changes in environmental regulations. Topics covered in the bulletin are categorized under the following headings: Air and Noise, Water and Marine, Waste, Drinking Water, Environmental Agents and Toxic Chemical Substances, Environmental Impact Assessment, Public Nuisance Complaints, Soil and Groundwater, Recycling, and Environmental Analysis. Users can specify topics of interest to receive the latest updates in those areas.

In the past, information on revisions of environmental regulations was primarily disseminated in dispatches to related businesses and civil organizations, in addition to regular postings on the EPA's regulations website. To expand the scope of services and make it easier for citizens to receive relevant email, the EPA will notify citizens and enterprises about environmental regulations via email to ensure widespread awareness of developments to regulations under revision, and allow ample preparation and response time.

The EPA has already established the "New Environmental Regulation e-Bulletin" online subscription which will quickly provide information on the latest revisions to regulations that individuals are concern about. Internet users need only enter the EPA website (<http://www.epa.gov.tw>), click on "Subscribe to Environmental News & Regulation Updates," and enter their email address to subscribe to this

service. Further allowing users to read about regulations that interest them the most, the EPA has specially divided the topics into the following nine categories: Air and Noise, Water and Marine, Waste, Drinking Water, Environmental Agents and Toxic Chemical Substances, Environmental Impact Assessment, Public Nuisance

Complaints, Soil and Groundwater, Recycling, and Environmental Analysis. Citizens can select the topics they care about the most, and if there is news of notices, announcements, or public hearings in their selected categories, the EPA will promptly send out an email notification.

環保署環保新聞或法規新訊 訂閱/取消/查詢

環保署 環保新聞 / 法規新訊 主要提供本署發布最新的環保新聞及法規訊息，您也可以利用此頁來作環保新聞歷史資料的查詢。

●訂閱 環保新聞 / 法規新訊 - 請填妥下列表格

<input type="checkbox"/> 環保新聞
法規新訊
<input type="checkbox"/> 空氣及噪音
<input type="checkbox"/> 水及海洋
<input type="checkbox"/> 廢棄物
<input type="checkbox"/> 飲用水、環境用藥及毒性化學物質
<input type="checkbox"/> 環境影響評估
<input type="checkbox"/> 公害糾紛處理
<input type="checkbox"/> 土壤及地下水
<input type="checkbox"/> 資源回收
<input type="checkbox"/> 環境檢測
<input type="checkbox"/> 環境檢驗所電子報
姓 名: <input type="text"/>
電子信箱: <input type="text"/>
<input type="button" value="訂閱"/>

●取消訂閱 環保新聞 / 法規新訊 - 請輸入您的E-mail帳號

電子信箱: <input type="text"/>
<input type="button" value="取消訂閱"/>

●環保新聞/訊息歷史資料查詢 - 請輸入欲查詢資料的相關訊息

期間:	090 年 01 月 01 日 ~ 095 年 08 月 01 日
訊息種類:	環保新聞

Webpage of the EPA's New Environmental Regulation e-Bulletin

Comprehensive Planning

Government Shows Excellent Green Procurement Performance in 2005

The EPA has announced the results of government agency green procurement records in 2005, which far exceeded the Executive Yuan approved goal of 70% of spending in that year. Government agencies reached targeted procurement ratios of all designated environmental products and have already established internal green procurement promotion plans and evaluation systems. Overall, government agencies did quite well in terms of green procurement performance.

According to an evaluation of government performance on green procurement in 2005, seven central government agencies—Ministry of the Interior, Ministry of National Defense, Ministry of Economic Affairs, Ministry of Transportation and Communications, the Central Bank of China, Veterans Affairs Commission, and the Council of Agriculture—were commended for outstanding performance. The following nine county and municipal governments were also rated with outstanding performance: Taipei City, Kaohsiung City, Hsinchu City, Chiayi City, Tainan City, Taipei County, Chiayi County, Yilan County, and Penghu County. These agencies all reached targeted procurement ratios of designated green products. Furthermore, they have all established internal green procurement promotion plans and evaluation systems.

The EPA indicates that spending on green procurement in 2005 reached NT\$6.77 billion, an increase of over NT\$1.06 billion compared to the previous year's spending of NT\$5.

79 billion (2004). The percentage of spending on green products designated for procurement reached an average of 81.6%, showing a 2.4% increase in the 2004 rate of 79.2%, and far surpassing the 70% target set by the Executive Yuan for 2005. The EPA believes success in attaining these targets can be attributed to the fact that each agency has already incorporated green procurement concepts. The Central Trust of China has proactively complemented efforts to promote green procurement by listing environmental products under inter-entity supply contracts. This facilitates selection by each agency and has greatly augmented the results of government green procurement.

The EPA states that based on the *Resource Recycling Act* (資源回收再利用法), starting this year all public agen-

cies must implement green procurement practices including the Presidential Office Building, the Legislative Yuan, the Judiciary Yuan, and the Examination Yuan. The EPA is confident that green procurement will be implemented successfully and is now promoting green procurement plans for the private sector to encourage the participation of enterprises, organizations, and schools in green procurement plans. It is hoped that joint participation between public, private and civil sectors will give shape to green consumption environmental trends among the citizenry.



Green Procurement Reporting Flowchart

Air Quality

Stricter Emission Standards to Reduce Odor Pollution

Odor problems have become one of the leading disturbances to living environments in Taiwan. The EPA has drafted revisions to emission standards regarding boundaries and flues of stationary source odor pollution. Revisions were based on onsite inspection results of domestic stationary pollution sources and referenced foreign and domestic control regulations and pollution prevention technology. Promulgation of this revision is expected to reduce the concentration of industrial odor emissions by over 60%.

Of all public nuisance complaints handled by environmental agencies in recent years, odor pollution is the number three complaint. Odor pollution complaints sharply increased from 24,000 cases in 2002 to 28,000 cases in 2005. Complaints were most frequent in mixed residential/commercial zones and near industrial or agricultural activities. Possibly due to land consolidation or changes to regional plans or land categorization, residential areas are increasingly proximate to pollution sources, therefore explaining the

increase in number of odor complaints. Addressing this problem, the EPA has revised emission standards on odors from stationary pollution sources to ensure improvements are made to the current situation.

The EPA indicates that odor pollution emission standards contained within stationary pollution source air pollutant emission standards have not been revised for over a decade.

Some standard values do not conform to current living quality demands. Inconsistent standards for boundaries of industrial areas, agricultural areas, and agricultural areas adjacent to non-industrial areas account for the steady increase of public nuisance complaints. The EPA has drafted revisions to relevant emission standards to improve this situation. The revision process referenced results of onsite inspections at domestic stationary pollution sources as well as domestic and foreign control regu-

lations and pollution prevention technology. Now complete, the draft revision stipulates emission standards for boundaries and flues of stationary source odor pollution.

Boundary emission concentration standards mainly draw on Japan's experience in drafting control standards and can be classified into three levels of management based on land use, dwelling conditions, and degree of impact on people's lives. Apart from maintaining the existing standards of 50 odor units for industrial and agricultural zones, and 10 odor units for non-industrial and non-agricultural zones (such as residential, commercial,

government administration, cultural/education, scenic and environmental protection areas), the revisions have added a third level of variable standards for buffer zones. Authority for determining standards for buffer zones is delegated to municipal and county governments and based on local need, as well as frequency and number of citizen complaints. This method allows delimitation of stricter boundary standards for odor pollution sources based on actual need.

In drafting flue emission standards, the EPA referred to foreign control standards as well as statistical analysis of odor inspection results from domestic

flues over the years. The revised standards adopt land management models based on land use targets. A uniform flue standard is adopted for non-industrial and non-agricultural zones, while emission flues in industrial and agricultural zones are simplified into two grades based on flue height. Standards will initially be based on height of emissions and are 1 to 25 times stricter than current standards. Promulgation of these revisions is expected to reduce the concentration of industrial odor emissions by 60%. This will improve air quality of residential areas adjacent to industrial or agricultural areas and will ensure reduction of complaints due to odors from industrial or agricultural activities.

Toxic Substance Management

Toxic Chemical Substance Management Tightened

Inappropriate transport of toxic chemical substances can increase the risk of environmental contamination and jeopardize the health of citizens. The EPA has begun conducting a special inspection of enterprises not certified to transport toxic chemical substances. Revisions have been made to regulations governing declaration of toxic chemical substances as waste to ensure proper handling and control of toxic chemical substances.

At present, domestic businesses such as laundry services, laboratories of schools and testing organizations, hotel laundry services, electronics companies and chemical manufacturers may generate waste containing toxic chemical substances (TCS). Inappropriate handling of TCS increases the risk of environmental contamination and creates human health concerns. The EPA indicates that currently already 710 permits have been issued for manufacture, import and sale of TCS and 1,754 certificates have been issued for usage and storage of waste. The EPA has reinforced inspection and control to ensure that these companies are handling TCS according to regulations, and to prevent illegal import, manufacture, sale, use, storage, or disposal of TCS.

According to Article 18 of the

Toxic Chemical Substances Management Act (毒性化學物質管理法), in circumstances that call for the suspension of handling toxic chemical substances, one of four options are available: 1) return to original manufacturer or vendor; 2) sell or transfer to another party; 3) return to overseas exporter; or 4) disposal pursuant to the *Waste Disposal Act* (廢棄物管理法). Priority is given to the first three methods in the interest of sharing resources and achieving full use of leftover TCS. Upon confirmation of no alternatives to return, sale or transfer to other parties for reuse, before disposing of the TCS, the responsible party must inspect each batch and attach a TCS waste declaration along with a detailed chart to each batch, in addition to registering with local competent authorities. After ob-

taining approval of local authorities to dispose of the said TCS, the responsible party must follow relevant regulations in the *Waste Disposal Act* to prevent environmental contamination.

The EPA has revised the *Working Guidelines for Registering Handling of Toxic Chemical Substances* (毒性化學物質運作備查作業要點) regarding declaration of TCS waste, which states that those parties unable to clean up or dispose of TCS waste according to the *Waste Disposal Act* may not declare the substance as waste and must abide by the *Waste Disposal Act* to ensure proper treatment. For those parties that have declared TCS waste in 2005, the EPA calls on industry to be sure to apply for permits and make regular reports according to regulations, in addition to confirming treatment method of the said TCS.

Recycling

Recycling and Treatment Firms Must Reregister Every Five Years

In the past, registration permits for recycling and treatment firms had no expiry date. To prevent companies from inappropriate actions during business operations that could lead to environmental contamination onsite or at adjacent areas, a revision has been drafted to stipulate re-registration every five years. Moreover, local environmental protection bureaus are now required to conduct onsite inspections of certain recycling and treatment enterprises in addition to the current paper audit scheme.

Over the years the resource recycling industry has seen the gradual development of self-employed scavengers to full-scale businesses. Continually working to guide this industry and improve the image of recycling locations, the EPA now offers educational training to professional recyclers. For large-scale recycling companies, the EPA's guiding principle is to strengthen management and enhance environmental measures. Through substantial management and upgrading of pollution control facilities, the EPA and recyclers jointly protect residential environments and achieve resource recycling and sustainable use goals. This partnership also prevents recyclers from polluting work areas and the surrounding environment due to inappropriate operations.

The EPA indicates that the people of Taiwan hold increasingly stringent expectations for environmental protection. To more effectively manage those undertaking recycling

and treatment of mandatory recyclables, the EPA has drafted revisions to the *Regulations Governing the Mandatory Recyclables and Waste Recycling/Treatment Industry* (應回收廢棄物回收處理業管理辦法). The draft revision primarily involves the rights and interests of county/municipal environmental protection bureaus (EPB) as well as entities of a certain scale engaged in recycling and treatment of mandatory recyclables and waste. Aiming to enhance control over the quality of these businesses' affairs and minimize pollution, the focus of this revision addresses the lack of expiry date on recyclers' registration permits. Recycling businesses will now be required to reregister every five years to prevent inappropriate conduct that could result in pollution of recycling areas and surroundings. Those failing to reregister after the

deadline will have their registration permit revoked. For businesses that have already obtained their permit before this revision is promulgated, a deadline for re-registration will be set to allow an ample grace period. Additionally, the draft revision requires treatment organizations currently subject to paper audits to undergo an onsite inspection by their local EPB. As for recycling organizations, however, it is up to the local EPB to determine whether an onsite inspection is necessary. Onsite inspections for recycling organizations follow the same procedures as onsite inspections of treatment organizations. Registration can be processed only after passing inspection.

Activities

Japan Experts Visit Taiwan to Advise on Chemical Leaks

Taiwan is currently establishing a marine chemical pollution emergency response system. In hopes of drawing from Japan's sound system for petroleum and chemical pollution prevention and risk management, as well as building domestic capacity to respond to pollution caused by marine chemical spills, the EPA has specifically invited Japan experts to Taiwan to

introduce Japan's chemical spill emergency response and hazardous substance management system. After discussion, the EPA arranged for the experts to visit petroleum and chemical substance transport hubs in different areas of Taiwan and provide guidance and risk assessment of these work areas. Discovered flaws were discussed with the companies along with suggestions for improvement.

This was a good opportunity to familiarize domestic companies with Japan's experience in preventing chemicals from polluting marine environments and effectively minimize the risks of handling chemical products.

General Policy

Single Portal for Reporting Air, Water, Waste, and Toxics Underway

Different permit application methods for pollutant discharges involving air, water, waste, and toxic chemical substances have impeded the EPA from effectively integrating management in the past. This year (2006) the EPA is integrating the websites of these services in hopes of launching a single portal for all relevant industries by the end of the year. This website will allow inquiries into common baseline data to facilitate management of pollutants.

In the past, permit application methods were different for air pollution, water pollution, waste, and toxic chemical substances. Some required filing out a paper form while others offered downloadable application forms that could be printed out. As a result, industries often had to re-write the same information. This also required different reviewing agencies, each of which stored databases on their own computers so that basic data on air, water, waste, and toxic substances were not only different but were also filed in a different format making it hard to integrate information. Also, as there was no basis for comparison of data, environmental protection controls had become susceptible to loopholes. The EPA has thus begun this year (2006) to integrate permit application websites for air pollution, water pollution, waste, and toxic substances, so that all industries can apply through one unified portal by the end of this year. This

will allow searches of common baseline data to facilitate management. The EPA further plans that by the end of 2007, the integrated database website will automatically generate related permit information related to air pollution, water pollution, waste and toxic substances. Companies will no longer need to fill out duplicate applications and will be able to apply for permits and report pollution output through one comprehensive website.

Companies' actual reports on output of water pollution, air pollution, waste, and toxic substances will be integrated into one information management system called the Environment Permit System (EPS). This will save businesses the hassle of repeatedly filling out the same baseline data and will allow searches into volume of raw materials used, production output, and generation of air pollution, wastewater, waste, and toxic chemical substances. The new system is expected to facilitate

factory internal operations and proper treatment of waste materials. Environmental authorities can also use the EPS to search for relationships between each company's own data on output of air pollution, wastewater, waste and toxic substances and the actual reports on how they handled those waste products. This information can be crosschecked with their permits; if a discrepancy occurs an onsite inspection can be made and penalties issued. This measure is anticipated to effectively intimidate businesses from illegally handling pollutants, as well as achieve optimal results in streamlining government and benefiting the public.

News Briefs

Vehicles Caught Dodging Inspections to Be Fined

Based on the *Air Pollution Control Act* (空氣污染防治法), all levels of authority are authorized to send personnel with warrants to inspect or appraise public/private premises or vehicles for the state of air pollutants emitted and the quality of petroleum-based

fuels used. Inspectors can mandate that relevant information be provided. The EPA has also added an article stipulating criteria of penalties toward vehicle related violations of the Air Pollution Control Act. In the future, regardless of whether the vehicle is a motorbike, small car or large vehicle, the user or owner may be subject to

fining ranging from NT\$5,000 to NT\$75,000 for evading regulations, or obstructing or refusing inspections, appraisals or mandates.

Recycling

Recycling Organizations and Individuals Awarded for Top Performance

The EPA held a special award ceremony on 27 July 2006 to increase citizen awareness of progress toward improving the image of the recycling industry. The scope of this annual activity has been expanded to include the most outstanding government agencies promoting recycling in 2005 and results of a performance evaluation of school battery recycling projects in 2005. Corporations and organizations also pitched in by donating accident insurance and essential recycling equipment to self-employed recyclers.

The EPA has initiated the Recycling Image Improvement Plan to provide more security for the work and lives of individual professional recyclers. The plan encourages enterprises to donate accident insurance and necessary equipment to self-employed recyclers. From the month of June (2006) already 30 businesses have pledged to cooperate in this project by donating accident insurance and equipment to individual recyclers. Since 2005, the EPA has been providing self-employed recyclers with tools of the trade such as tricycles, pushcarts, reflective vests, and reflective signs for improved safety. It is anticipated that this equipment will reduce the occurrence of accidents on the job. These concrete actions show society's concern for this line of work and offer greater guarantee and respect for the work and lives of individual recyclers, creating a new environmental image for professional scavengers.

A total of 2,275 individual recyclers from 127 townships have participated in the image improvement plan. The EPA has also specially held the "Care for the Environment - A New Face for Recycling" activity to hit home the message that recycling is a respectable profession. This year's promotion activities have been expanded with two award ceremonies: the "2005 Outstanding Implementing Agencies Promoting Recycling Work" and the

"2005 Performance Evaluation of Promoting Battery Recycling at Schools." Enterprises and groups were also commended for donating accident insurance and equipment to recyclers. The award ceremonies were held on 27 July 2006 at the Hotel National Taichung. Awards were also presented to winners of three contests on story writing, photography and dedicated media reporting to further arouse citizen concern for self-employed recyclers.

As for evaluation results of the nation's recycling promoters in 2005, Taichung City, Kaohsiung County and Yilan County environmental protection bureaus (EPBs) received top-place awards, and 15 county/municipal EPBs and 47 township administrations received second-place awards. Thanks to the hard work of local governments, garbage volumes have steadily dropped each year. Promotion of

recycling by local government organizations not only substantially reduces the amount of garbage requiring treatment but also reduces administrative expenses. Of the top performing schools, there were 50 elementary schools, 15 junior high schools, 3 high schools or vocational schools, and 3 colleges and universities. Each school received a plaque or monetary award ranging from NT\$30,000 to NT\$200,000. From September 2005 to May 2006 participating schools accounted for 22% of all batteries recycled nationwide during that period. This is quite an accomplishment considering that spent batteries are a potential source of serious pollution. By integrating with the education system, battery recycling concepts are put into practice as a part of fundamental education and students take home the common sense habit of recycling batteries. This is one way to successfully influence citizens' attitudes toward recycling.



EPA Deputy Minister Lin Ta-hsiung awards self-employed professional recyclers

News Briefs

Environmental Diplomacy: EPA Assists Allied Nation Set Up Water Quality Analysis System

Accepting an invitation from the Ministry of Foreign Affairs, the EPA dispatched personnel to Sao Tome and Principe on 17 July 2006, one of Taiwan's allies in Africa, to assist in planning the capital's outpatient center and help establish colon bacillus testing equipment and environmental water quality testing systems. The mission included helping Sao Tome and Principe to establish standard operating procedures for an environmental microbe laboratory, and training local personnel to perform independent tests. Based on an internal evaluation by the EPA's Environmental Analysis Laboratory, Sao Tome and Principe plan to adopt two testing methods—one that is used internationally and one that has been promulgated by the EPA. This measure is expected to suit Sao Tome and Principe's current and future testing needs.

New Drinking Water Equipment Regulation and Treatment Agent Announced

After gathering information and consulting regulations set by the World Health Organization and the US, the EPA listed chlorine dioxide gas (ClO₂) as a legal drinking water treatment agent on 6 July 2006. There are now twenty such agents allowed by the EPA for use in Taiwan. Additionally, to complement revisions to the *Drinking Water Management Statutes* (飲用水管理條例), the EPA promulgated revisions to the *Regulations Governing Drinking Water Equipment Maintenance* (飲用水設備維護管理辦法), which have been renamed as the *Regulations Governing Use and Maintenance of Continuous Supply Stationary Drinking Water Equipment* (飲用水連續供水固定設備使用及維護管理辦法). In addition, the EPA now no longer requires communities to report to the competent authority when examination of their own water supply equipment does not comply with regulations.

Kaohsiung ESTP Unveils Environmental Expo Center

Owing to the EPA's continual promotion and assistance of the Kaohsiung County Government to jumpstart the Kaohsiung Environmental Science and Technology Park, already 19 firms have entered the ESTP. The management and research building of the ESTP was designed with green building concepts, using natural material and native vegetation to blend in with the surrounding country environment. An environmental education and exposition center has also been established in this building to display resource recycling technology and various advanced environmental technology, as well as environmental theme displays on petroleum and electricity, installed by Chinese Petroleum Corp. and Taipower, respectively. The displays are rich in content and educational value, and the EPA invites citizens and school children to pay a visit.

Motorbike Manufacturers Encouraged to Comply with Future Emission Standards

The fifth stage of emission standards for motorbikes will take effect from 1 July 2007. The EPA indicates that the fifth stage emission standards place tighter control on carbon monoxide—3.5 times lower than fourth stage emission standards. Standards for hydrocarbons and nitrogen oxides are 5% stricter. In the interest of protecting air quality and ensuring that motorbike owners use high quality low-polluting bikes, the EPA now urges the industry to promptly make available motorbikes in compliance with the fifth stage emission standards. The EPA has revised the *Regulations Governing Subsidies for Purchasing Low-Polluting Motorbikes* to reward manufacturers for making low-polluting bikes available ahead of schedule and encouraging consumers to purchase low-polluting motorbikes. It is hoped that economic incentives can be used to encourage businesses to market fifth stage emission standard compliant motorbikes. According to EPA



the Kaohsiung Environmental Science and Technology Park

data on motorbike inspections, already two companies have applied for fifth stage compliant motorbikes, which will put four kinds of engines on the market in the near future. Other domestic motorbike companies and foreign motorbike importers are currently making preparations. It is expected that these companies will successively begin offering compliant motorbikes before the new emission standards take effect.

Diesel Vehicle Fourth Stage Emission Standards Implemented Ahead of Schedule

With the EU ready to implement the fourth stage emission standards from 1 October 2006, the EPA is keeping pace with international vehicle control trends by implementing stipulations on diesel car fourth stage emission standards in Article 5 of the *Transportation Vehicle Air Pollutant Emission Standards* ahead of schedule on 1 October 2006 (originally scheduled to go into effect on 1 January 2007). Also after 1 October 2006, all Taiwan manufactured new vehicles and all imported vehicles must attain these standards before they can be certified. Existing vehicle makes that have already obtained certification will be given a grace period for continued production or import until 31 December 2006. The grace period for domestic vehicles refers to production date; the grace period for imported vehicles refers to the date when vehicles are put on the boat for shipping.

Environmental Agent Regulations Amended

In order to reinforce safe usage of the wide range of environmental agents frequently employed by residents to clean their living environments, the EPA has been assimilating views of concerned parties regarding promulgated revisions to the *Environmental Agents Control Act* (環境用藥管理法) on 27 January 2006. Revisions were accordingly promulgated this July (2006),

including changes to rules on labeling methods, important items regarding installation of specialists, procedures for issuing permits to vendors and disease vector control firms, and criteria for packaging or commissioning manufacture of environmental agents. In addition, regulations on advertisement of environmental agents specifically state that false information, exaggeration, or other inappropriate content is not

allowed on advertisements. Certain changes to regulations reflect revisions to the *Environmental Agents Control Act* regarding delegation of authority.

Activities

Construction Audits Ensure Quality Environmental Facilities

To ensure top quality engineering of environmental facilities, the EPA has established a Construction Audit Taskforce. This group proactively guides and reviews the quality of construction on the nation's environmental facilities (i.e., incinerators, landfills, recycling centers, etc.). Priority is given to construction projects that are behind schedule and construction projects that citizen are highly concerned about. By July 2006 already 53 project sites had been audited and tracking mechanisms were established to ensure improvements are carried out. In addition, the EPA held the "Environmental Facility Construction Quality Forum" on 27 July 2006 at the Bali Incinerator in Taipei County. Public

Construction Commission officials explained regulations regarding construction quality and experts spoke on the latest landfill electronic leak monitoring technology. The forum also discussed construction audit procedures, how to improve common flaws in construction quality, and how to effectively prevent common mistakes in planning and design. It is hoped that construction audit results work to actualize improvements and make a positive contribution in terms of design and planning, construction quality, rules and regulations, and administration.

Environmental Children's Books Provide Hope for Next Generation

The EPA held the "Second Green Sprouts Award Selections" in the in-

terest of making more resources available to students, parents and teachers when engaging in environmental education readings and activities. This event selects Taiwan's best environmental education books for schoolchildren and teenagers. A total of 305 books put out by 56 publishers were entered in the selection event. Experts and scholars from the fields of environmental education, nature literature, and children's literature conducted a rigorous three-month selection process including preliminaries and reexaminations to carefully select 40 outstanding environmental education books. The EPA hopes this event will lead the next generation to understand and care for the environment, and inspire a legion of environmental scouts.

Environmental Policy Monthly Taiwan, R.O.C.

Publisher

Dr. Chang Kow-lung, Minister

Publishing Directors

Chang Tzi-Chin; Lin Ta-hsiung;
Tung Te-po

Advisors

Chang Hoang-jang; Chang Shen-ho; Chen Chau-teh; Chen Shis-how; Chen Hsiung-wen; Chen Lian-ping; Chen Shean-rong; Fu Shu-chiang; Ho Soon-ching; Horng Yuh-fen; Hsiao Hui-chuan; Huang Kuang-hui; Huang Wan-chu; Leu Horng-guang; Lu Chiao-song; Ni Shih-piao; Pong Sheng-ming; Wang Chen-chi; Wang Lung-chic; Wang Pih; Wu Tien-chi; Young Chea-yuan; Yueh Chang-shya

Editor-in-Chief

Roam Gwo-dong

Executive Editors

Y. F. Liang, Chang Shiuan-wu,
Hsiao Lee-kuo, Tsai Chih-Yen,
Peter Morehead

Editorial and translation support provided by:

Hui-kuo Consulting, Ltd.,
Sustainable Earth Network

The EPM has been published monthly since July 1997 and is posted on the EPA website at <http://www.epa.gov.tw/english/webezA-3/code/main.asp>

For inquiries or subscriptions to the printed version, please contact:

Environmental Policy Monthly
Environmental Protection Administration
Office of Science and Technology
Advisors
41, Sec. 1, Jhonghua Rd.,
Taipei, Taiwan, R.O.C.
tel: 886-2-2311-7722, ext. 2207
fax: 886-2-2311-5486
e-mail: umail@sun.epa.gov.tw

ISSN: 1811-4008

GPN: 2008600068

Contents Copyright 2006.

printed on recycled paper



行政院新聞局出版登記證局版北市誌
字第壹陸壹壹號

中華郵政北台字第6128號執照登記為
雜誌交寄

