



Environmental Policy Monthly

Environmental Protection Administration, Taiwan, ROC

Feature Column

Toxic Disaster Rapid Response Units Ready for Action

Statistics on toxic chemical substance accidents in recent years show an annual increase in onsite disaster support and related environmental monitoring. The EPA is therefore promoting the "Plan to Strengthen Toxic Chemical Substance Safety Management and Disaster Emergency Response." This plan focuses on establishing a central environmental disaster monitoring center and seven environmental disaster emergency response units throughout Taiwan. The plan also calls for purchasing ample toxic chemical disaster emergency response detection equipment to ensure timely response to all types of environmental disaster.

Since 911, the government has given more consideration to the vulnerability of terrorist attacks via land, sea and sky. All circles have set great store by EPA's existing toxic disaster emergency response information centers (TDERICs) in northern, central and southern Taiwan. The need to continually build the capacity of specialist units to provide onsite assistance, including technical information and response support, is now widely recognized. According to the Disaster Prevention and Response Act (災害防救法) and the Toxic Chemical Substance Disaster Rescue Plan, the EPA is the central competent authority of toxic chemical substance disaster prevention and rescue affairs. The EPA is responsible for promoting toxic chemical substance disaster prevention and rescue, and strengthening the organization of disaster prevention and rescue. Routine duties include meetings on various levels of toxic chemical substance toxic disaster prevention and rescue work; duties during times of disaster include supervision and deployment

of various levels of toxic disaster emergency response centers. Current work is focused on completing the toxic disaster emergency response mobilization system and establishing the toxic disaster report system. Also important is routine testing of horizontal and vertical communication between related organizations.

Enhancing Toxic Disaster Prevention

Taiwan began planning the establishment of a toxic chemical substance disaster prevention and emergency response system early on in 1995. By 1997, the EPA had officially established the Toxic Disaster Emergency Response Information Center (TDERIC) at the Industrial Technology Research Institute (ITRI). This center has provided first-level toxic disaster response service, including telephone liaison with distant areas, providing technical information to onsite response personnel and aiding in computer searches for information.

In This Issue

Feature Column: Toxic Disaster Rapid Response Units Ready for Action.....	1
Environmental Public Nuisance Complaint Survey Shows 88% Respondents Satisfied	4
Strengthened Management of Container Recycling.....	5
Recycling Industry Registry System to Prevent Trade of Stolen Goods	5
Supermarkets Have Highest Rate of Overpackaged Gift Boxes	6
Environmental Analysis and Testing Organization Accreditation System Unified.....	6
Evaluation of EIA Consulting Firms in 2006 Announced.....	7
Stationary Source VOC Air Pollution Fee Emission Coefficients Announced.....	8
Suggestions Solicited on Revisions to Stationary Source Odor Emission Standards.....	9
Maximum Volume Restriction Added to High Speed Rail Noise Standards.....	10
News Briefs.....	10
Activities.....	12

Taking toxic disaster emergency response service one step further, the EPA established three regional TDERICs in northern, central and southern Taiwan in 2001, and upgraded its services by providing onsite monitoring. The concrete goal has been set to have specialists provide onsite support within one hour of the first report of a toxic disaster. Support services include coordinating response personnel, aiding in the dispatch of response resources, and providing onsite technical information.

In practice, however, one-hour onsite support by a central support personnel was only achieved in 35% of toxic disasters due to inadequate prevention measures and lack of a comprehensive planning system organized by a central monitoring center. Moreover, due to changes in conditions at the disaster site, environmental pollution analysis and restoration became of utmost concern to citizens. The EPA thus began promoting the "Plan to Strengthen Toxic Chemical Substance Safety Management and Disaster Response," which was ratified by the Executive Yuan and promulgated in June 2005.

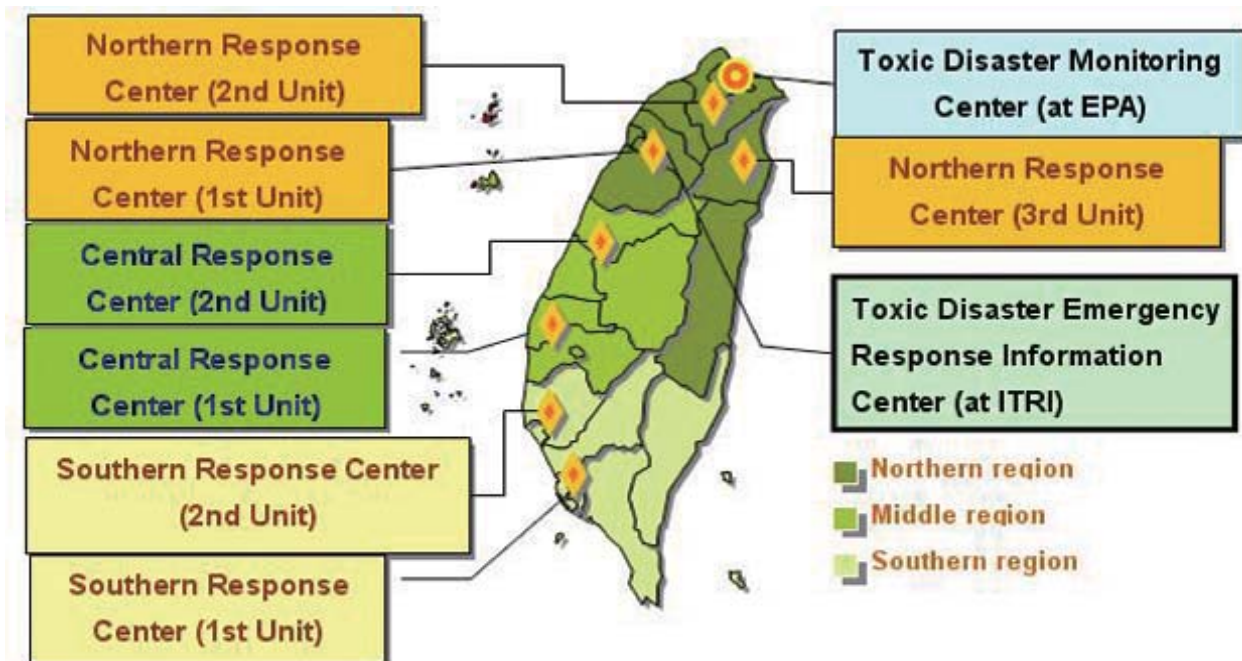
According to this plan, the EPA will invest NT\$1.1 billion from 2006~2009 toward the gradual establishment of a central environmental disaster monitoring center and seven environmental disaster emergency response units throughout Taiwan. The plan also sees to the purchase of adequate detection equipment for use during toxic chemical disaster emergency response. These measures will boost Taiwan's toxic disaster response system up one more notch to the third level. The plan not only ensures

that professional personnel will immediately arrive at the site of a toxic disaster to provide coordination and information services, but also ensures availability of equipment to carry out analysis and assist post-disaster cleanup and restoration work.

Toxic Disaster Response System Achievements

The EPA is keeping to schedule with plans to gradually strengthen the toxic disaster response system. In addition to setting up an environmental toxic disaster monitoring center and TDERIC, all seven planned environmental toxic disaster emergency response units have been established throughout the nation. Out of a total of 378 toxic disaster and non-toxic disaster events reported in the media from January 2006 to March 2007, onsite support with emergency response was provided in 131 instances (including support for other various types of chemical product incidents). Continual work is being carried out to establish professional specialist resources and toxicology data in Mandarin, as well as proactively provide printed toxic chemical substance toxic prevention manuals and emergency response cards to assist firefighting and local environmental agencies in their prevention and rescue work.

As for providing ample equipment, the EPA has already purchased mobile airtight Fourier Transform Infrared (FTIR) spectrometers, transport equipment, an emergency response command vehicle, and 20 tonnes of accident emergency response relief



► Distribution of Toxic Disaster Response Units

equipment that can be deployed onsite. These items have been provided to emergency response units and professionals dispatched by other related agencies to assist other government agencies with onsite disaster response. Additional purchases of necessary toxic disaster emergency response equipment will be made this year (2007) to bolster the government's disaster relief capability.

Regarding toxic disaster exercises, no-warning tests and organization of a joint command system, each year the EPA conducts a nationwide toxic disaster drill, 32 local exercises, and toxic disaster surprise tests for designated factories to enhance each factory's ability to handle its own accidents. In addition, 59 Toxic Joint Command Taskforces have been established and enjoy total participation by 825 factories. The purpose of these taskforces is to conduct annual training and handle response work.

Prevention and Response Regulations Strengthened

In addition to establishing the government's toxic disaster emergency response system, the EPA is also proactively reforming the regulatory system. The EPA is now preparing the Working Guidelines for Toxic Chemical Substance Hazard Prevention and Emergency Response Plans (毒性化學物質危害預防及應變計畫作業要點) in adherence to the Toxic Chemical Substance Management Act (毒性化學物質管理法) revised on 3 January 2007. These guidelines require handlers of Class I-III toxic

chemical substances to establish hazard prevention and emergency response plans. Plans involving Class III toxic chemical substances must be made open to public scrutiny.

Required equipment and accident insurance to be in the possession of toxic substance handlers will be stipulated according to the Regulations on the Installation and Management of Toxic Chemical Substance Emergency Response Equipment, and Detection and Warning Equipment (毒性化學物質應變器材及偵測與警報設備設置及管理辦法) and the Regulations Governing Liability Insurance for Handlers of Toxic Chemical Substances (毒性化學物質運作人投保責任保險管理辦法). Factories are required to implement these measures in the early stages to prevent problems later on.

Future Goals

The EPA anticipates that through the Plan to Strengthen Toxic Chemical Substance Safety Management and Disaster Response, the nation's seven specialized environmental disaster emergency response units will be able to carry out detection, monitoring, response and follow-up restoration work immediately after disasters occur so that environmental disasters receive appropriate handling from beginning to end.

Prevention will also at the same time promote toxic chemical safety management and toxic disaster prevention preparation work, continue to update data on factories handling toxic chemical substances.



▶ Professional technicians and equipment play an essential role in the emergency response to a toxic disaster



▶ Experts arrive at the site of a toxic disaster within an hour to coordinate response and provide information

Use risk management programmes to prevent toxic disasters from occurring and effectively reduce the risks of harming citizens' health.

Important telephone numbers for toxic disasters:

1. Toll-free environmental public nuisance complaint hotline: 0800-066666 or 119
2. Environmental Toxic Disaster Monitoring Center: (02)2371-8526
3. Toxic Disaster Emergency Response Information Center: (03)591-7777
4. Northern Environmental Toxic Disaster Emergency Response Team: (03)583-1126
5. Central Environmental Toxic Disaster Emergency Response Team: (05)557-4899
6. Southern Environmental Toxic Disaster Emergency Response Team: (07)601-1235

General Policy

Environmental Public Nuisance Complaint Survey Shows 88% Respondents Satisfied

Results of the 2006 Public Satisfaction Survey on Environmental Agencies' Handling of Public Nuisance Complaints are now out. Of all respondents, 87.7% were satisfied with the service attitude of personnel answering the environmental public nuisance complaint hotline, for a 2.6% increase over 2005. Nearly 80% of respondents were satisfied with the service attitude of environmental personnel dispatched for onsite handling of public nuisance complaints.

To better understand the public's satisfaction and thoughts toward handling of public nuisance complaints by various levels of environmental agencies, the EPA commissioned a polling company to conduct a random telephone survey from January to September 2006 of people who have filed a public nuisance pollution complaint to an environmental agency. A total of 3,119 effective poll samples were taken with a confidence standard of 95% and a sampling error of 1.76%.

Poll results showed that 87.7% of respondents were satisfied with the service attitude of environmental public nuisance complaint hotline telephone answering staff. This marks a 2.6% increase in satisfaction ratings over last year. In addition, 79.6% of respondents were satisfied with the service attitude of environmental agency personnel dispatched onsite to handle complaints. Eighty percent of respondents were satisfied with the attitudes of environmental agency personnel for overall response to complaints. While more respondents were satisfied compared to 2005, the EPA expressed it will strengthen evaluation and reflect on how to improve its services, especially toward complaints expressing dissatisfaction with inspection handling results. The fact that 45.5% of complaints were repeat complaints filed for the same reason reveals the complexities and difficulties involved in improving public nuisance pollution sources.

The EPA has thus requested the Bureau of Environmental Inspection to assist with monitoring, strengthening double checks of repeated complaints, and actively investigating the reasons for complaints. As for categories of complaints, air pollution and odors were the most frequent reasons (33.3%), followed by noise problems (30.6%) and environmental sanitation (17.1%).

As for repeated complaints, air pollution and odors and noise were the most frequent repeated complaints. This shows that the public demand for a higher quality living environment has gradually increased, while it is also more difficult to eliminate this pollution source in residential living environments. Noise and odor problems are more likely to have an impact on the quality of people's lives, and repeat complaints occur when no measures are available to improve these problems.

The top two reasons for dissatisfaction with environmental agencies' handling of public nuisance complaints were "actual handling results were far from anticipated results" and "no improvements were made to pollution source." In addition to asking local environmental protection bureaus to strengthen pursuit and double checks of complaints the EPA will continue to hold training workshops for inspection personnel. The EPA will also request the Bureau of Environmental Inspection to assist with inspections to help eliminate pollution sources and maintain environmental quality.

Waste Management

Strengthened Management of Container Recycling

Working to strengthen management over the clearance and treatment of mandatory recyclable waste containers, the EPA promulgated revisions to the Methods and Facility Standards for Recycling, Storage, Clearance and Treatment of Waste Containers (廢容器回收貯存清除處理方法及設施標準) on 5 February 2007, effective from day of promulgation. Recycling and treatment enterprises undertaking the recycling, storage, clearance and treatment of mandatory recyclable containers are required to comply with relevant regulations to strengthen pollution prevention and recycling and reuse.

The EPA indicates that the Methods and Facility Standards for Recycling, Storage, Clearance and Treatment of Waste Containers have not been revised since first promulgated on 11 September 2002. In addition to revising dubious interpretations in the original regulation, the EPA has bolstered pollution prevention facilities and measures for certain procedures and methods likely to generate pollution during the stages of recycling, storage, clearance and treatment of mandatory recyclable containers. The EPA has also reinforced treatment methods for mandatory recyclable containers to increase the efficiency of recycling and reuse work. The focus of revisions was to comprehensively evaluate the definitions of related terminology so that

all waste management terminology is categorical and consistent. Moreover, regulations have been added for related pollution prevention equipment or methods for storage facilities (factories) and compressed packaging facilities as well as pollution prevention facilities for waste (pollution) from the treatment of pesticide containers and certain environmental agent containers. It has also been specified that reusable materials from the treatment of mandatory recyclable containers must be reused according to related regulations.

To protect the rights and interests of businesses and prevent impacts due to the promulgation of this revision, a six-month grace period has been given in which to make the necessary improvements.

Waste Management

Recycling Industry Registry System to Prevent Trade of Stolen Goods

The EPA is revising regulations to put an end to the illegal trade of stolen goods. The revision calls for the establishment of a commerce registry system that will help prevent recycling firms from becoming part of illegal trading channels for stolen goods. The EPA requests each recycling enterprise buying or selling mandatory recyclables to establish a commerce registry, and record daily transactions in detail.

Since the Executive Yuan established a cross-ministerial joint taskforce for investigating stolen goods, the number of thefts in Taiwan has noticeably decreased despite the large number of thefts initially uncovered in the beginning stage. The National Police Agency (NPA) has recommended further raising the effectiveness of these efforts by working through a commerce registry system to eliminate channels for illegal trade of stolen goods. The EPA has responded to the NPA's call with plans to revise regulations that prevent the recycling industry from becoming a channel for stolen goods. The EPA will wield command over the flow of goods by requiring recycling enterprises to keep a daily registry of purchases and sales.

The EPA is currently planning revisions to regulations over the recycling industry. The focus of revisions concerns statistical reports of business operations and requires industry to establish a registry for purchases and sales of designated items prone to theft. The registry should record daily transactions including materials, amounts, dates, sources and destinations. Data must be retained for five years and made available to related agencies for inspection. The EPA anticipates that this system will go a step further toward eliminating theft.

Working to complement efforts to improve public security and prevent enterprises from accepting stolen goods, the EPA is actively promoting a full set of measures to assist and manage the recycling industry.

Posters advocating the above points have already been printed out and distributed to the industry for posting. Electric wire and cable samples are provided to recycling enterprises to aid in making comparison, and to prevent enterprises from mistakenly accepting stolen goods. All recycling enterprises should keep books to record purchases and sales, no matter whether entries are complete or not. Local environmental protection agencies, the EPA's Bureau of Environmental Inspection and the Environmental Police Force, Ministry of the Interior, will coordinate

with this plan to strengthen inspection and prevent the recycling industry from becoming a link in stolen goods rings.

The revised draft of this regulation is posted in detail on the EPA's website in the draft regulation preannouncement section (<http://w3.epa.gov.tw/epalaw/index.aspx>). Comments toward the content of this draft revision can be made during this preannouncement period or during an upcoming public hearing on this topic.

Recycling

Supermarkets Have Highest Rate of Overpackaged Gift Boxes

The EPA conducted a survey at the beginning of this year on four kinds of sales channels to gain a better understanding of the state of gift box packaging on the market. A greater proportion (over 22%) of overpackaged processed food gift boxes were sold at supermarkets, followed by mass merchants at 20.7%.

The first stage of the EPA's "Restriction on Product Overpackaging" policy went into effect on 1 July 2006. The restriction measure stipulates a packaging-to-size ratio of less than one for cake and cookie gift boxes, alcohol gift boxes, cosmetics gift boxes and computer programs, and limits the number of packaging layers to no more than two (except for cake and cookie boxes and computer programs with CD-ROMs, which can have no more than three layers of packaging). The second stage will be extended to include gift boxes of processed food. Effective from 1 July 2007, this stage also stipulates a packaging-to-size ratio of less than one and no more than two layers of packaging.

As for monitoring improvements made to marketed gift box packaging, the EPA has dispatched personnel from 27 January 2007 to 4 February 2007 to make onsite inspections of Chinese New Year gift box packaging at the four types of vendors. Among the 1,003 gift boxes surveyed, 23% were cakes and cookies, 26% were alcohol and 51% were processed foods. None of the gift boxes of cakes, cookies and alcohol were found to be overpackaged. However, approximately 14% of processed food gift boxes

surveyed were suspected to have overpackaging, perhaps because the restriction policy had not yet been effective for these items. The greatest proportion of processed gift boxes suspected to have overpackaging were sold at supermarkets (over 22.1%), followed by mass merchants (20.7%), department stores (9.8%), and convenience stores (7.1%). The most common type of overpackaging error was failure to meet the stipulated packaging-to-size ratio.

The EPA's analysis of reasons for non-compliance with packaging standards includes: products in gift boxes were packaged too loosely with excessively high spacers. On streets selling Chinese New Year paraphernalia, the EPA found that a portion of dried food gift boxes had excessively large spacers and unnecessary trim. Many companies therefore have considerable room for improvement. The EPA especially calls on processed food manufacturers to expedite compliance with regulations calling for packaging improvements. If overpackaging is still discovered after 1 July 2007, businesses will face penalties ranging from NT\$30,000 to NT\$150,000.

Environmental Inspection

Environmental Analysis and Testing Organization Accreditation System Unified

Responding to industry's opinions regarding inconsistent review procedures and evaluation methods in Taiwan's analysis laboratory accreditation system, the EPA has discussed the management of the analysis

laboratory system with the Taiwan Accreditation Foundation (TAF). Integration work will be carried out this year in four stages to create consistent evaluation and management between the EPA and TAF accreditation systems.

Executive Yuan Premier Su Tseng-chang presided over a forum between industrial and commercial organizations on 23 November 2006 to gather the opinions of the private sector. Most forum participants were representatives of industrial and commercial organizations. Many recommendations were proposed to the government and these will be kept for reference. Regarding inconsistencies in current review procedures and evaluation methods of Taiwan's analysis laboratory accreditation system, a representative of the Taiwan Environmental Laboratory Association proposed that the Executive Yuan should unify the nation's laboratory accreditation systems by promoting streamlined administrative procedures and consistency with international accreditation systems.

In response to this recommendation, on 14 December 2006, the EPA entered discussion with TAF regarding management of the analysis laboratory system. During this meeting it was preliminarily decided that in 2007 a feasibility assessment will be conducted on integrating certain parts of these different systems

in four stages. The first stage calls for a review of consistencies between existing regulations and accreditation evaluations. The second stage calls for exchanges and research between professional onsite evaluators. The third stage entails evaluation and exchange between laboratories accredited on common terms. The fourth stage calls for assessing the feasibility of partially adopting TAF accreditation for the analysis laboratory system management.

By the end of February, over 200 environmental analysis laboratories had already obtained TAF accreditation, over 80 environmental analysis and testing organizations had obtained permits from the EPA, and over 10 laboratories had obtained both types of analysis laboratory accreditation. The EPA anticipates that redundant system management evaluation procedures can be avoided in the future by promoting consistent management evaluation systems. This policy will greatly benefit organizations interested in obtaining both EPA and TAF accreditation.

Environmental Inspection

Evaluation of EIA Consulting Firms in 2006 Announced

The EPA announced the results of the latest evaluation of environmental impact assessment technical consulting organizations. Of the 38 technical consulting organizations to participate in this round of evaluations, seven were rated A, four were rated A-, thirteen were rated B, and fourteen were rated C.

Since 1997, the EPA has been conducting evaluations of environmental impact assessment technical consulting firms to raise their standards and shorten the environmental impact assessment review process. Evaluations are conducted based on basic data provided by consulting firms covering the following eight indicators: sector annual data indicators, manpower quality indicators, performance indicators, service capacity indicators, workload indicators, document submission and return indicators, technology R&D indicators and technology introduction indicators. Evaluators also conducted reviews based on capacity of evaluation technology, quality of EIA documents, software and hardware facilities, and professional aptitude in each sector. The firms were then evaluated and graded according to results.

Evaluation results for the year 2006 showed that

all 38 technical consulting firms participating in this evaluation complied with standards. Seven firms were rated Grade A, four firms were rated Grade A-, thirteen firms were rated Grade B, and fourteen firms were rated Grade C. Grade A firms were chosen for their superior competence in handling EIAs, ability to handle EIAs for a variety of development activities, and strong ability to provide broad support to client companies. Grade A- firms were chosen for their superior competence in handling EIAs and ability to handle EIAs for a variety of development activities. Grade B firms were chosen for their high competence in handling EIAs. Grade C firms were chosen for their acceptable performance in handling EIAs. Complete results of this evaluation can be downloaded from the EPA website (http://www.epa.gov.tw/attachment_file/近2次評鑑合格名單1.pdf).

Moreover, this year the EPA will work through the "EIA

Technical Symposium" to invite outstanding technical consulting firms to evaluate skills and experience, and provide fair and objective methods or suggest more appropriate environmental protection measures, less

stringent policies, and environmental management plans that enhance the quality of environmental impact assessment skills.

Air Quality

Stationary Source VOC Air Pollution Fee Emission Coefficients Announced

To streamline industry calculation of VOC emissions, the EPA has announced related measurement regulations for VOC air pollution control fees, which will be collected beginning this year.

On 27 December 2006, the EPA announced the Stationary Pollution Source Air Pollution Control Fees (固定污染源空氣污染防制費收費費率), adding VOCs to the types of pollution for which fees will be collected. Consideration has been given to the difficulties of measuring VOCs as their escape into the atmosphere occurs not only via stacks but also during manufacture processes. Therefore, in planning the first stage of VOC pollution fee collection (1 January 2007 to 31 December 2009), measurements will be based on emission coefficients to simplify calculations of VOC emissions for industry. On 16 February 2007, the EPA announced the Regulations on Industry Manufacture Emission Coefficients, Operating Unit (Including Equipment Components) Emission Coefficients, Control Efficiencies and Other Measurements for Public and Private Stationary Pollution Sources Reporting VOC Air Pollution Control Fees (公私場所固定污染源申報空氣污染防制費之揮發性有機物之行業製程排放係數、操作單元(含設備元件)、排放係數、控制效率及其他計量規定) to serve as the method for calculating VOC emissions and collecting VOC air pollution control fees this year (2007).

This regulation adopts the USEPA AP-42 emission factor as a prototype and adjusted according to related Taiwan EPA plans. After localization an average emission coefficient is drawn up. Industry associations were convened in July 2006 to discuss Stationary Source Air Pollution Control Fee Rates, and were asked to suggest emission coefficients. From 1 December 2006 to 19 January 2007, a series of intensive meetings, including 14 discussions and confirmatory meetings on emission coefficients were held with the Industrial Development Bureau (MOEA) and industry associations. These meetings resulted in the drafting of 185 manufacture emission factors for 15 types of industries, 201 emission factors for 5 types of operating units, and 32 emission factors for 19 types of control efficiencies.

The EPA emphasizes that as automobile manufacturers and polyurethane synthetic leather manufacturers have already set VOC emission calculations and reporting methods, these two industries may continue using methods in the original control regulations to calculate VOC emissions. Public and private factories for which EIA reviews have been approved should also calculate VOC emissions according to emission coefficients promised in their EIA reviews. If stationary pollution source manufacture emissions are entirely concentrated and released through factory stacks and there is no suspicion of fugitive emissions, stack inspection results can be used to calculate manufacture emissions. However, other operating units (including equipment components) must continue to use the coefficients stipulated in this regulation to calculate VOC emissions. Other stationary pollution sources must also use coefficients stated in this regulation to calculate VOC emissions.

When the status of emissions by these industries does not conform to that described in this regulation, the industry association may submit an industry representative's related operations and emission verification data to the EPA and propose revising the recommended values for that industry's manufacture emission coefficients. Once this is approved, the manufacture emission standard for that industry may be revised; however, for different industries with different manufacture characteristics or control facilities, each industry must individually apply to the EPA for its own factory emission coefficients or control efficiencies. Approved coefficients or efficiencies can then be used to calculate emissions.

The EPA will revise emission coefficients and control efficiencies based on related survey results when necessary. The EPA has already planned a series of briefings to assist industries with calculations, reporting and establishing independent factory coefficients. Details on these briefings can be found

Air Quality

Suggestions Solicited on Revisions to Stationary Source Odor Emission Standards

The number of public nuisance complaints concerning odors has remained high over the past few years. The EPA is currently drafting revisions to the Odorous or Noxious Emission Standards (臭氣或厭惡性異味排放標準) under the Stationary Source Air Pollution Emission Standards (固定污染源空氣污染物排放標準). The revision process has entered the public hearing phase and opinions are currently being solicited from all circles.

According to EPA statistics, air pollution complaints have increased from 33,000 cases filed in 2002 to 38,000 cases in 2005. Odors were the cause of 53% of cases in 2002 and 74% of cases in 2005. A further look at the growth rate of public nuisance complaints according to pollution categories shows that in the last 10 years, odor complaints exhibit the most noticeable increase at 118%. Upon initial analysis the EPA reasoned that this marked increase was due to the prevalence of odors in people's everyday lives compounded by Taiwan's burgeoning population density. This may explain why odor problems have increasingly become the focus of complaints.

It has already been over a decade since revisions have been made to the Odorous or Noxious Emission Standards (臭氣或厭惡性異味排放標準) under the Stationary Source Air Pollution Emission Standards (固定污染源空氣污染物排放標準) after its promulgation in 1992. Certain standard values do not conform to current demands for quality of life. Another reason for the current revision is the need to improve the wide discrepancy in boundary standards for industrial/

agricultural zones and non-industrial/agricultural zones, which has kept the number of complaints steadily high. The standards entered the public hearing process on 23 January 2007 and opinions are currently being solicited from all circles.

This draft revision focuses primarily on modifying boundary emission standards based on land use methods and degree of impact on citizens lives. The different chemical composition of odors generated by agricultural and industrial sources have differing effects on human health. Moreover, industrial odor prevention technology is mature and boundary odor emission standards are categorized into different zones. The abovementioned revision maintains an odor concentration standard of 50 for existing livestock farms. The boundary odor concentration standard of newly constructed livestock farms, however, is set at 30, as appropriate designs to prevent odors can be implemented at the time of construction.

As for industrial odors, increased authority is granted to municipal and county governments based on local demands for control measures. Citizen complaint

filing mechanisms are taken into account so that municipal and county governments can draw up stricter odor pollution source boundary standard controls based on frequency of complaints. Furthermore, stack emission standards have also been modified based on land management models and land users. Non-industrial and agricultural zone stack emission standards have been unified. Stack heights in industrial and agricultural zone stack emission standards have been simplified into two brackets with varying strictness based on stack height. The EPA anticipates that the revised emission standards will enhance quality of life in Taiwan.



▶ Industrial emissions of odorous pollution are a frequent source of frustration among the public

Maximum Volume Restriction Added to High Speed Rail Noise Standards

Working to decrease noise from the High Speed Rail (HSR), the EPA has decided to establish a special working group to oversee that the Taiwan High Speed Rail Corporation (THSRC) actively reduces current noise levels by establishing a noise response mechanism, and expediting subsidies to residents along the line for building noise barriers. The EPA is also drafting High Speed Rail Maximum Volume Recommended Values as a reference for setting instantaneous volume measurements.

Since the Taiwan High Speed Rail commenced operations on 5 January 2007, residents along the railway have frequently expressed that the noise disturbs the peace of their living environment and have demanded THSRC provide concrete improvement plans. On 8 February 2007, the EPA invited the Ministry of Transportation and Communications' Bureau of High Speed Rail (BOHSR) and THSRC to discuss concrete measures and policies to reduce the noise. During this meeting, the EPA decided to establish a special working group to supervise THSRC in actively improving noise control. During this meeting, the EPA asked THSRC to actively respond to residents' complaints by establishing an active noise response mechanism, expediting noise barrier subsidies for residents along the line, and including high-rise apartment residencies and other buildings along the line in their mid- and long-term plans.

Additionally, the EPA has gone a step further in responding to citizen complaints of noise by drawing up maximum volume recommended values for the HSR to reflect the actual effect noise has on residents along the line. These values will represent the instantaneous maximum volume for high-rise apartment neighborhoods and nearby buildings to maintain peaceful residential environments. Existing environmental noise standards are based on weighted averages of noise volumes during an hour timeframe,

mainly to control train frequency. However, this measurement is different than what people's senses actually perceive. Therefore, additional maximum noise control methods have been adopted to solve the problem of sudden excessive volumes disturbing the peace.

The EPA has therefore adopted a new method of regulating noise based on "train frequency average maximum volumes." The High Speed Rail Maximum Volume Recommended Values (高速鐵路最大音量建議值) were reviewed and approved on 13 February 2007. When citizen complaints do not specify location coordinates, the control value is set at 80 decibels for noise within 25 meters of the HSR. When complaints specify the location, the control value is set at 80 decibels for residential areas and cultural/education areas; and 85 decibels for other areas. Taiwan's HSR system adopts Japan's new T700 rail system. Measurement methods have been modeled after control regulations set by Japan's Ministry of the Environment. Noise control standards will be set for the High Speed Rail as soon as noise control regulation revisions are completed and approved by the Legislative Yuan. Loudest Volume Recommended Values will then officially become the control standards. The THSRC has already expressed agreement with the EPA's use of these standards to improve noise problems.

News Briefs

Water Source Quality Inspections of Bottled and Dispensed Drinking Water Reveal 97.1% Compliance

The EPA has drawn up an inspection and control plan to effectively manage bottled and dispensed drinking water companies. There are currently 160 regulated water source enterprises that produce bottled and dispensed drinking water. A total of 604 inspections were conducted by county and municipal environmental protection bureaus (EPBs) in 2006.

Out of 341 random tests for water source quality, substandard results were found in 10 tests for a rate of 2.9%. Enterprises with products that did not comply with standards have been penalized by county and municipal governments according to regulations. Substandard results were found in the categories of coliform density (3 companies), nitrate nitrogen (1 company), manganese (1 company), turbidity (1 company), and turbidity and ammonium nitrate (1 company). All companies met standards for all other categories including heavy

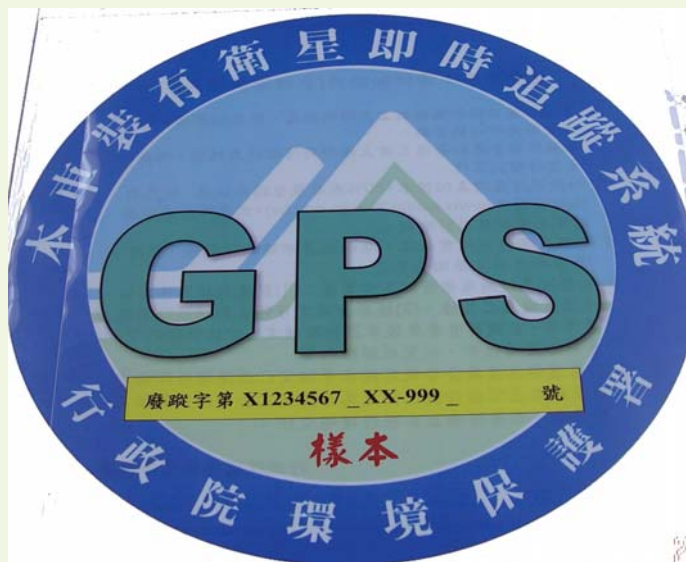
metals, pesticides, and VOCs among others. EPBs also made 4,513 audits of dispensed water companies to gain command over upstream water sources of these enterprises and include them among regular random testing of water quality.

Newly Targeted Clearance Vehicles Required to Install GPS in Two Stages

To wield effective command over industrial waste flow, the EPA has successively announced four batches of industrial waste clearance vehicles required to install GPS tracking equipment according to the Waste Disposal Act (廢棄物清理法) as well as installation schedules. Now further expanding control targets, the EPA has convened a public hearing on 2 February 2007 to announce newly added clearance vehicles and solicit views from all circles. Revisions will be implemented in three stages. Revisions will take effect from 1 September 2007 for clearance vehicles for organic sludge, inorganic sludge, non-hazardous oil sludge, mixed sludge, and paper pulp sludge. Revisions for all other targets will become effective from 1 June 2007. Revisions will be effective from 1 January 2008 for organizations that have already obtained permit documents (stating transport methods of containers or tankers) before water pollution control measure plans and permit application review regulations take effect. This date has been chosen to coordinate with the implementation of water pollution regulations. The EPA will hold an explanatory briefing to provide guidance to new clearance vehicles requiring the installation of GPS equipment. To ensure that industries understand revisions and respond in a timely manner, related information is available on the EPA's industrial waste control website: <http://waste36.epa.gov.tw/gpszone/>

Green Product e-Directory Available for Download

The EPA has compiled the Green Consumer Guide in electronic form to increase consumer awareness and appreciation of environmental products, promote green consumption, conserve resources



▶ Installation of GPS equipment ensures effective command over industrial waste flow

and allow all citizens to enjoy a healthy and safe living environment. This Green Consumer Guide will provide information on Green Mark and Class II environmental products, including recycled products, sanitation products, information products, home electronics, water-conserving products, energy efficient products, office furniture, biodegradable products, organic material products, building materials, articles for daily use, industrial products, solar products, and Class II environmental products. The EPA welcomes citizens and businesses to download this convenient directory from its website: <http://www.edf.org.tw/News/gcg2007-1.pdf>

All Pig Farms to Be Included in Industrial Waste Report System

In response to the domestic problem of pig carcass disposal, the EPA coordinated a joint meeting with the Council of Agriculture and the Department of Health on 7 February 2007. During the meeting, it was decided that in the future pig raising operations no matter how small or large will be included under the EPA industrial waste report management system in stages. The Council of Agriculture will inspect all farms that raise under 3,000 pigs at one time and dispose of pig carcasses on their own. A list of these farms has been established, and they will

undergo yearly onsite audits to keep track of all pig carcasses.

Methods and Facility Standards for Recycling, Storage, Clearance, and Treatment of Waste Electric, Electronic and IT Products Announced

With the constant release of new electronic products and in response to the inclusion of waste fans and keyboards on the list of mandatory recyclable waste, the EPA has merged existing related regulations. On 16 February 2007, the EPA announced the Methods and Facility Standards for the Recycling, Storage, Clearance and Treatment of Waste Electric, Electronic and Information Products (廢電子電器暨廢資訊物品回收貯存清除處理方法及設施標準). This includes stricter standards for regulating the treatment of cathode-ray tube and liquid crystal displays. In the future, recycling and treatment enterprises unable to perform recycling, clearance, or treatment of waste electric, electronic and information products according to these standards will face fines ranging from NT\$60,000 to NT\$300,000. Those failing to correct the situation within a given period of time will be penalized with consecutive daily fines. For serious violations, perpetrators will be ordered to

halt business operations for one month to one year or permanently shut down some

or all of their business activities. Detailed information on these standards can be accessed on the

EPA's website at <http://w3.epa.gov.tw/epalaw/search/LordiDispFull.aspx?type=16&lname=4352>

Activities

Environmental Water Quality Monitoring Website Awarded

The EPA has completed a new version of the National Environmental Water Quality Monitoring Information Network (<http://www.epa.gov.tw/wqm>), which will allow citizens to easily follow changes in water quality of water bodies in Taiwan including rivers, coastal recreation areas, reservoirs, marine waters and groundwater. Rather than providing single lists, the new website integrates regulations related to water quality data (such as relevant environmental standards to protect human health) and common professional water quality indicators (such as river pollution indicators) into electronic map format using colors and symbols to show time-space changes in Taiwan's environmental water quality. The innovative thinking and methods of this system in terms of its effects on citizens have earned the Bureau of Standards, Metrology & Inspection, Ministry of Economic Affairs' top award in the "2006 Digitization Achievement Award - E-Commercial and Service Government Plan." The system also received affirmation in the Executive Yuan's "2006 Various Organization Participation and Recommended System" computer information merit awards.

Entire Citizenry Partakes in National Cleanup Week

Tying in with the "Plan to Mobilize Citizens to Clean Up Residential Environments" and spring cleaning just before the Chinese New Year, the EPA has declared the week before Chinese New Year as "National Cleanup Week." On 10 February 2007, government agencies and the citizens of each county and municipality worked together to clean up public offices and residential areas. It is anticipated that all citizens join efforts during the annual spring-cleaning to clean up both indoor and outdoor environments in residential areas. The EPA suggested that in addition to the custom of cleaning up

our own houses, they should also check for and clean up possible breeding areas for mosquitoes by dumping out unused containers or giving them to sanitation crews, and draining out basements or other areas where water is likely to accumulate. Residents were also asked to clean up outdoor areas within four meters of their house, including alleys, pavement areas, and ditches by splitting up the labor among neighbors. Public facility management agencies should also strengthen environmental cleanup work and guide volunteers or environmental groups to work together on cleaning up untidy areas.

▶ The website provides maps to facilitate learning about and protection of the environment, and uses a color-coding system to show water quality

Environmental Policy Monthly
Taiwan, R.O.C.

Publisher
Dr. Chang Kow-lung, Minister

Publishing Directors
Chang Tzi-chin; Tung Te-po

Editor-in-Chief
Roam Gwo-dong

行政院新聞局出版登記證局版北市誌字第1611號
中華郵政北台字第6128號執照登記為雜誌交寄

Executive Editors
Y. F. Liang; Chang Shuan-wu;
Hsiao Lee-kuo; Chang Shao-wen;
Peter Morehead

Editorial and translation support
provided by:
Hui-kuo Consulting, Ltd.,
The EPM is available on the EPA website
at <http://www.epa.gov.tw/english/webzA-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@epa.gov.tw

ISSN: 1811-4008
GPN: 2008600068
Contents Copyright 2007.
printed on recycled paper

