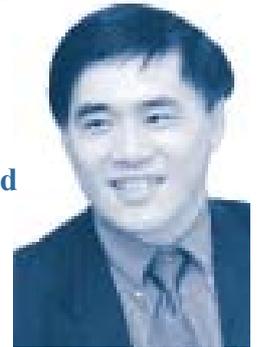




General Policy

Future Administrative Priorities and Budgeting

"Environmental protection work absolutely requires the participation of all citizens; it is not something that the EPA can carry out unaided." After announcing that 2002 would be "Rivers and Waterway Pollution Cleanup Action Year" at a press conference on December 11th, EPA Administrator Dr. Lung-Bin Hau then spoke the above words on Dec. 20th, while performing a budget review and fielding legislators' questions at the Legislative Yuan. For their part, the nation's legislators affirmed the EPA's efforts to protect the environment and clean up rivers and waterways. This month's feature article will look at Administrator Hau's responses to legislators' questions, and examine the EPA's administrative and budgetary focal points in 2002. The 2002 EPA budget has already passed review by the Legislative Yuan.



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Administrator Hau Presents EPA Policy to the Legislative Yuan

EPA Administrator Hau gave an oral report to the Legislative Yuan on December 20th concerning the EPA's budget and administrative plan. Hau emphasized that the future implementation of environmental protection policy will always take protecting the environment as its overriding goal. The EPA will take appropriate measures to resolve the environmental protection problems of greatest concern to the public, and is firmly committed to protecting the ecological environment, enhancing environmental quality and transforming Taiwan into a Green Silicon Island.

Apart from the above policy statement, Administrator Hau also presented an overview of the EPA's 2002 administrative plan. This plan includes the following key items:

1. The EPA will take active steps to establish recycling demonstration zones (see EPM Vol. IV, Issue 11).

2. Industrial waste management will be strengthened.
3. Efforts will be taken to improve the environmental quality of rivers and the sea, and intensify soil and ground-water pollution prevention.
4. The EPA will plan and implement total quantity control (TQC) measures for air pollution in the Kaohsiung-Pingtung area as part of its drive to improve air quality.
5. The efficiency of environmental impact assessments (EIA) will be improved.
6. Citizens' participation in environmental protection activities and movements will be encouraged.
7. International environmental protection cooperation and interchange will be promoted.
8. The EPA will strengthen toxic substance management measures and accident prevention and response measures.

In addition to these eight focal points, the EPA will also step up environmental protection audit

and oversight work, and continue implementation of the "Phase III Taiwan Waste Disposal Plan" and incinerator construction work.

These initiatives are reflected in the EPA's total 2002 annual budget of NT\$9.431 billion, which is NT\$300 million less than the 2001 budget. Waste management accounts for close to NT\$4.5 billion (49%) of the new budget, which is the biggest share of any budget item. Water pollution prevention and water quality protection together account for close to NT\$1.5 billion (16%), and comprise the second largest item. The remaining items are respectively strengthening environmental protection facilities and equipment (NT\$1.3 billion-15%), environmental monitoring station replacement and establishment of an emergency/disaster response system (4%), personnel and administrative expenses (10%), and other services (6%).

Administrator Hau has taken determined steps to resolve environmental protection problems and has forcefully upheld the law since assuming his post. The legislators therefore commended

his performance in clearing up many persistent pollution problems (such as pollution along the Erhjen River-see EPM Vol. IV, Issue 8) and expressed their thanks to all the hard-working personnel at the EPA. With this high level of legislative backing, the 2002 EPA budget was able to pass it Legislative Yuan review unchanged.

Administrator Declares 2002 River Cleanup Action Year

Administrator Hau publicly announced that 2002 would be "River and Waterway Pollution Cleanup Action Year" at a routine EPA press conference held on December 11th. A few days later, at the Legislative Yuan budget review on December 20th, Hau declared during questioning by legislators that rivers and waterways are the lifeblood of Taiwan and the arteries of the environment. Hau expressed hope that all citizens would participate in river and waterway pollution prevention work, and thereby keep Taiwan's mountains eternally green and its waters eternally pure.

The EPA gave a short multimedia presentation showing recent efforts to prevent and clean up river and waterway pollution at the Dec. 11th press conference. The presentation used the metaphor of a caring mother nurturing Taiwan to describe rivers and waterways, and showed how these vital arteries are currently afflicted with severe pollution. The EPA therefore appealed in the presentation for more serious attention to this problem.

The EPA's intense efforts to clean up river and waterway pollution are gradually meeting with success, and its achievements are winning recognition from the legislature. In its 2002 budget, the EPA seeks to allocate NT\$1.4 billion for river and waterway cleanup work, and this work will reflect the different kinds of pollution present and the most effective ways to tackle them. Nine of the country's most polluted rivers-including the Erhjen River, Chiangchun River and Nankan River-have been listed as the focal areas of river and waterway pollution cleanup and remediation work in 2002.

EPA 2002 Annual Budget

Item	Current year	Previous year	Difference
Technology development	45,740	40,070	5,670
General administration	601,194	564,159	37,035
Comprehensive plans	5,391,530	3,486,637	1,904,893
Air quality protection and noise control	16,049	18,447	-2,398
Water quality protection	337,871	359,806	-21,935
Waste management	340,878	396,078	-55,200
Environmental sanitation and toxic substance control	127,845	33,730	94,115
Control and dispute resolution	36,849	40,795	-3,946
Environmental monitoring information	348,796	94,306	254,490
Strengthening environmental protection facilities and equipment	1,329,664	3,919,490	-2,589,826
Regional environment management	558,829	510,580	48,249
First reserve fund	4,000	4,000	0
Subtotal	9,139,245	9,468,098	-328,853
National Institute of Environmental Analysis	215,939	211,874	4,065
National Institute of Environmental Training	75,784	74,653	1,131
Total	9,430,968	9,754,625	-323,657

Note: These figures, presented in NT dollars, are based on the budget sent to the Legislative Yuan for review. This table does not include the budgets for the Soil and Groundwater Pollution Remediation Fund, Air Pollution Control Fund and Recycling Fund.

Apart from committing the funds needed for pollution cleanup, Administrator Hau will also work together with local governments and make use of existing manpower to step up the detection and elimination of river and waterway pollution sources. This will safeguard current cleanup results and simultaneously insure that rivers and waterways do not suffer even more severe damage.

Hau emphasized that the task of river and waterway pollution cleanup and prevention is not something that the EPA and its investigative personnel can successfully accomplish on their own. Rather, it requires the participation of all citizens, and can only succeed with everyone's help. But at the same time, to insure that existing manpower and funds are used as effectively as possible, the EPA must perform long-range planning and implement relevant projects.

Administrator Hau ended his presentation with an appeal to the public to come forward and report any illicit polluters: "You make a phone call, and I'll crack down on them." We can restore the cleanliness of our rivers if we all work together. The EPA's river and waterway pollution report hotline is 0800-066-666.

Hillside Quarry Face Level Standards Announced

The 90th conference of the EPA EIA Review Committee passed the *Hillside Quarry Face Level Standards* (坡地礦區殘壁階段標準) proposed by the Bureau of Mines, MOEA, in December 2001. These standards stipulate that if quarry faces are located in sight of railways or county roads (and above), in all cases the height of a single level or the width of a ledge shall not exceed five meters (while already-excavated quarries are exempt from this regulation, the quarry should avoid spoiling the view by not facing a railway or highway whenever possible). Quarry face level standards differ, however, for different categories of mines and quarries (such as quarries for soil, raw material stone and building stone).

Air Quality

VOC Reduction Incentives for Stationary Sources Expanded

Volatile organic compounds in addition to the notorious sulfur oxides and nitrogen oxides, are a particularly difficult form of air pollution to control because they disperse easily and are difficult to monitor. The EPA has, therefore, decided to double the value of VOC emissions reduction refunds and hopes to begin collecting air pollution fees for VOC in 2003 as well.

The EPA promulgated revisions to *Air Pollution Reduction Incentive Regulations for Public and Private Stationary Pollution Sources* (公私場所固定污染源空氣污染減量獎勵辦法) on November 28th. These regulations aim to encourage enterprises operating stationary pollution sources to move more quickly in lowering the volume of their VOC emissions. In addition to doubling emissions reduction refunds from NT\$ 10 per kilogram to NT\$ 20, these revised regulations also provide subsidies for emissions analysis and lower the required frequency of analysis in order to reduce analysis costs associated with refund applications.

The original *Air Pollution Reduction Incentive Regulations for Public and Private Stationary Pollution Sources* were implemented in accordance with Article 19-2 of the *Air Pollution Control Act* in 1997. Initially, the implementation of these regulations focused primarily on the reduction of sulfur oxide and nitrogen oxide

emissions. While they also targeted VOC emissions, VOC emissions reduction refunds of just NT\$ 10 per kilogram were unable to attract the interest of enterprises because they were too small to offset the high costs of operating continuous monitoring equipment and conducting analysis.

The revised regulations also lower the required frequency of emissions analysis from each month to each quarter; this will greatly cut analysis expenses for enterprises. In addition, addressing the heavy burden of analysis expenses, the EPA has for the first time provided subsidies to offset analysis costs.

The addition of analysis expense subsidies mean the incentive measures in these regulations have been expanded from just two types, reduction refunds and reduction volume, to a total of three types. The EPA expects these expanded incentives to encourage more operators to invest in VOC emissions reduction.

The EPA, following extensive deliberations with operators, promulgated these revised incentive regulations on November 28th. The EPA also plans to begin collecting air pollution fees for VOC emissions in 2003. Operators will be permitted to use their emissions reduction volumes to lower their air pollution fees. Enterprises subject to total quantity controls will in the future be granted special consideration for their current efforts to reduce emissions volumes. The EPA is encouraging operators to move quickly in upgrading their pollution control facilities so they can take advantage of these new incentive measures and contribute to the improvement of air quality.

For more information please call 02-2311-7722 ext. 2772.

Water Quality

Hog Raising Prohibition in Major Watersheds Yielding Results

After one year of diligent work on the part of the EPA and various government authorities, the task of compensating and removing hog raisers from five major river basins is yielding a significant improvement in water quality. In particular, the removal of 460,000 hogs from the Kaoping River basin has resulted in a dramatic improvement in water quality; ammonia nitrogen content has fallen from 1.0~1.74 mg/liter to 0.27 mg/liter, meeting water quality standards for Class B bodies of water (less than 0.3 mg/liter). The amount of ammonia nitrogen found in source water pumped into tap water treatment plants is now only one-third of what it was in the past.

To improve the quality of Taiwan's drinking water, the EPA and various levels of government have worked hard for a year carrying out the removal and compensation of hog raisers in five water source areas in the basins of the Kaoping, Tamshui, Touchien, Tachia and Tzengwen rivers. By November 30th of 2001, 99.2% of all hog pens in these river basins had been dismantled and put out of operation. As a result of this effort, water quality in the Kaohsiung-Pingtung area showed marked improvement.

According to EPA statistics, a total of 4,880 hog raisers had been persuaded to relocate from the above five river basins during the six-month period beginning in June of 2001. This has led to the removal of at least 554,000 hogs-466,000 of which were removed from the Kaoping River basin alone. Water quality in the five river basins has improved significantly as a consequence, and has shown the most dramatic improvement in the Kaoping River. In fact, fish are reappearing in some sections of the river for the first time in many years.

compensation of hog raisers from water source protection areas in five major river basins, namely the Kaoping, Tamshui, Touchien, Tachia and Tzengwen rivers. The goal of this effort, which has been implemented at a cost exceeding NT\$6.45 billion, is to remove more than 500,000 hogs from the five water source areas, and thereby safeguard the quality and safety of drinking water used by the 12 million residents of these river basins.

However, because this plan has affected the livelihoods of several thousand hog raisers, implementa-

By November 30th of 2001, 99.2% of all hog pens in these river basins had been dismantled and put out of operation. As a result of this effort, water quality in the Kaohsiung-Pingtung area showed marked improvement.

Taking the Kaoping River, originally home to the greatest number of hog raisers, as an example, the removal of more than 460,000 hogs from the river basin has brought about an obvious improvement in water quality; ammonia nitrogen content has fallen from 1.0~1.74 mg/liter to 0.27 mg/liter, meeting water quality standards for Class B bodies of water (less than 0.3 mg/liter). The amount of ammonia nitrogen found in source water pumped into tap water treatment plants is now only one-third of what it was in the past. It is now only necessary to add one-third of the water treatment chemicals needed in the past, a historic low.

The EPA points out that the one of the key provisions of the *Framework Plan for Protecting the Quality of Drinking Water Sources* (飲用水水源水質保護綱要計畫), passed by the Executive Yuan in 1998 to improve the quality of public drinking water in Taiwan, is the removal and

tion has been a long and difficult process. First, the EPA spent almost two years formulating compensation standards, and had to contact or negotiate with relevant authorities, hog farmers' groups and local government on countless occasions before achieving a general consensus. The EPA finally announced compensation standards and implementation guidelines, and formally began implementation work, on August 29, 2000.

Among the problems faced during the implementation period were steady resistance from some hog raisers, attempts to secure greater compensation, the revision of the *Tap Water Act* (自來水法), and the shrinkage or elimination of protection areas. But with the assistance of all levels of government, these problems were overcome, and the plan was successfully completed according to its original timetable.

Hoping to thoroughly eliminate pollution generated by hog

raising, Administrator Hau stated in October that the EPA had established a forward command post in the Kaohsiung-Pingtung area and was mounting a full-scale campaign to stamp out all hog farms in the river basin. It had been found as a result of this effort that, apart from the nine hog raisers who had applied for compensation but were still operating, another 315 hog raisers had not applied for compensation and were still raising a total of approximately 14,000 hogs.

Hau reiterated that these hog raisers will not be able to receive compensation, and the EPA and local governments will take strict steps to search out and shut down hog raising operations with 20 or more hogs starting in January of 2002.

For more information please call 02-2311-7722 ext. 2810.

Sanitation

Post-Disaster Cleanup and Disinfection Guidelines Announced

The EPA has recently finalized its guidelines for conducting and organizing environmental cleanup and disinfection work in the wake of natural disasters. These guidelines require local governments to establish internal government notification systems and compile lists of machinery and equipment held by private waste handlers for immediate use in the event of a disaster. They also permit government agencies to sign open contracts with

private enterprises in order to facilitate a rapid response to post-disaster cleanup needs.

Such major natural disasters as typhoons, floods and earthquakes generate masses of waste and accumulated water, causing a rapid deterioration of the living environment. Environmental cleanup and disinfection work in disaster areas presents a serious challenge to environmental agencies aiming to prevent the spread of infectious diseases.

The EPA and local environmental agencies have amassed a great deal of post-disaster recovery experience following the 921 Earthquake and the numerous typhoons that have struck Taiwan. Based on the lessons learned through this experience, the EPA has formulated the *Natural Disaster Environmental Cleanup and Disinfection Support Guidelines* (天然災害環境清理及消毒支援作業要點). These guidelines will now always be on hand when it is necessary to mobilize government and private sector resources for the purpose of cleaning up in the aftermath of a natural disaster.

These guidelines require county and city governments to establish comprehensive internal government notification systems which would act as inter-agency information channels in the event of a natural disaster. These local governments are also directed to make preparations for mutual assistance among themselves and to expand and inspect inventories of disaster prevention and rescue machinery and equipment.

Also, in addition to requiring local governments to compile lists of machinery and equipment held by private waste handlers, the guidelines permit government agencies to sign open contracts with relevant private enterprises in order to facilitate a rapid

response to disaster cleanup needs.

Military units regularly fill an essential role in post-disaster recovery work. Therefore, townships in need of post-disaster cleanup and disinfection support from the military will be able to apply for military assistance through the disaster response centers or military affairs centers in their county or city. However, in the case of especially serious disasters, the EPA will be responsible for the overall planning and coordination of military assistance provided by the Ministry of National Defense to local governments.

The EPA, after having requested input from local environmental protection bureaus, has completed its formulation of the Natural Disaster Environmental Cleanup and Disinfection Support Guidelines and has notified local environmental protection bureaus of their implementation.

Taichung's Cellular Electromagnetic Radiation Meets Standards

The EPA completed a sampling survey of electromagnetic radiation from mobile phone base statistics in the greater Taichung area in September and October of 2001. In keeping with the results of a similar survey of the greater Taipei area performed in May and June, measured values were uniformly in compliance with the *Recommended Nonionizing Radiation Environmental Values* (非游離輻射環境建議值) announced by the EPA. The EPA plans to go ahead and test mobile phone base stations in the greater Kaohsiung area in the near future in conjunction with the Directorate General of Telecommunications, MOTC. Besides giving the EPA a basis for the drafting of nonionizing radiation control measures, the survey report can also serve as a reference for government agencies (such as the MOTC and MOEA), academic institutions, or industry (see EPM Vol. IV, Issue 8).

Dioxin Control Standards for Electric Arc Furnaces Announced

To step up control of dioxin pollution (see EPM Vol. IV, Issue 5), the EPA formally announced the *Steel Industry Electric Arc Furnace Dioxin Emission and Control Standards* (煉鋼業電弧爐戴奧辛管制及排放標準) in December 2001. These standards specify that new electric arc furnaces installed after January 1, 2002 must comply with a dioxin emission value of 0.5 nanograms. Existing electric arc furnaces must comply with a dioxin emission value of 5 nanograms beginning on January 1, 2004, and must comply with the 0.5 nanogram emission value starting on January 1, 2007. However, to insure that it is practical and feasible for existing electric arc furnaces to comply with the 0.5 nanogram value, the EPA has stated that firms and relevant academic and environmental protection groups may submit concrete scientific data and information before May 31, 2006, to guide future review and revision work.

Air Quality

Vapor Recovery Controls to Target New Filling Stations

The number of filling stations has greatly increased since the government opened the petroleum products market to private enterprises. With most filling stations located in urban areas, public criticism concerning fugitive fuel vapor emissions continues to be a problem. The EPA, in drawing up its draft of the *New Filling Station Vapor Recovery Equipment Standards*, has selected to-be-established filling stations as

priority targets for the installation of fuel vapor recovery systems. These standards, which will kick off the implementation of vapor recovery policies, are expected to prove effective in reducing fuel vapor pollution from filling stations.

The EPA, having finalized its draft of the *New Filling Station Vapor Recovery Equipment Standards* (新設加油站油氣回收設施標準), has selected to-be-established filling stations as priority targets for the installation of fuel vapor recovery systems (see EPM Vol. IV, Issue 5).

The number of filling stations has greatly increased since the government opened the petroleum products market to private enterprises. With most filling stations located in urban areas, public criticism concerning fugitive fuel vapor emissions continues to be a problem. EPA statistics show that over 30,000 kilotons of organic pollutant vapors escape from fuel pumping and storage equipment at filling stations every year, accounting for over 6% of total annual organic pollutant emissions in Taiwan. The primary pollutants composing these vapors are benzene, toluene, xylene, ethylbenzene and other hydrocarbons. These pollutants are harmful to human health and exacerbate ozone pollution.

1997 to July 2000. The EPA succeeded in extending subsidies to 1,361 filling stations, accounting for 66% of the over 2,000 filling stations in Taiwan.

Despite these efforts, around 700 existing filling stations have still not installed vapor recovery equipment, and they are not expected to do so anytime soon. Consequently, the EPA has decided to make the installation of vapor recovery equipment at to-be-established filling stations its policy priority in these new standards. The principle regulations in the EPA's draft of these new standards are regulations for control targets and required equipment, timetable and regulations for the installation of vapor recovery equipment at to-be-established filling stations, regulations for regular testing of vapor recovery equipment, regulations for the qualifications of equipment testing personnel, regulations and exemption conditions for small filling stations (those pumping less than 200 kiloliter per month).

In its draft, the EPA has chosen to target filling stations that apply for construction licenses after the standards are announced. The regulations would require the use and installation of vapor recovery equipment at times and places when and where fuel vapor is likely to escape. For instance, this

EPA statistics show that over 30,000 kilotons of organic pollutant vapors escape from fuel pumping and storage equipment at filling stations every year, accounting for over 6% of total annual organic pollutant emissions in Taiwan.

Aiming to address this fuel vapor pollution problem, the EPA first provided subsidies to help filling stations install pump nozzle vapor recovery equipment from March

equipment must be used when fuel tanker trucks are offloading fuel and must be installed on ventilation valves for fuel storage tanks. These regulations also

address the procedures followed by pump attendants. The equipment these regulations require to be installed includes fuel offloading vapor recovery equipment, vacuum pressure valves on fuel storage tanks and pump nozzle vapor recovery equipment.

The EPA, having already conducted a series of deliberations and public hearings, expects to present these new regulations in the near future.

Water Quality

Marine Environment Classification and Quality Standards Announced

The EPA promulgated the *Marine Environment Classification and Quality Standards* on December 26, 2001. These standards, which establish target values for marine area environmental quality, divide marine environments into three classes with different standards for each class.

Different marine areas have different characteristics. In order to protect environmental quality in different marine areas, the *Marine Pollution Control Act* (海洋污染防治法) requires that the

EPA, "based on a marine area classification system, marine environmental quality standards and the special characteristics of each marine area, draw up marine control zones and formulate marine environment control standards, and conduct planning and implement pollution control measures based on the standards for these control zones." Consequently, the EPA promulgated the *Marine Environment Classification and Quality Standards* (海域環境分類及海洋環境品質標準) on December 26, 2001. These standards will be the basis for all future marine conservation planning.

These standards divide marine environments into three classes, A, B and C, each with its own usage standards. Since Class A marine zones have the widest range of uses, their standards are the most stringent.

Regarding pollution standards, these new standards set standard values for ten heavy metals and ten pesticides for these three classes of marine environments in order to protect human health. They also set additional limit values and control items for each of these classes based on the different activities permitted in each zone.

Concerning the actual delineation of marine zone boundaries, all marine areas around Taiwan and Penghu are classified as Class A marine zones except for two zones: one running along south-

west Taiwan from the mouth of the Kaoping River (高屏溪) to the mouth of the Tsengwen River (曾文溪), and the other on the east coast running from Wangkung Harbor (王功漁港) in Changhua County to Bitoujiao (鼻頭角) in northeast Taiwan. These two zones are classified as Class B. Also, marine areas within a two-kilometer radius of river mouths, regional municipal wastewater outlets and wastewater outlets may be classified as one class lower than the class of the marine zone in which they are located.

In order to allow regulations to respond to changes in the marine environment in a timely manner, these standards call for a reevaluation and revision of classifications and standards every three years. They also stipulate that more stringent classifications or standards cannot be applied to marine zones that enjoy a gradual improvement in environmental quality to the point that they meet relevant environmental standards.

The EPA emphasizes that these classes and standards have been formulated with the aim of providing specific target values for marine environmental quality, not to restrict the use of marine areas. Future control activities will include the additional designation of marine control zones and marine environment control standards and the formulation of implementation plans and pollution control measures for each of these zones.

Marine Environment Classification, Usage and Standard Values

Class	Usage	Standards and Items for Pollutants	
		General Standards	Classification Standards
A	First Grade Aquaculture Use, Second Grade Aquaculture Use, Industrial Use, Swimming, Environmental Conservation	Ten Heavy Metals Including Cadmium and Ten Pesticides Including Total Organophosphates	Nine Limit Values
B	Second Grade Aquaculture Use, Industrial Use, Environmental Conservation		Six Limit Values
C	Environmental Conservation		Five Limit Values

Environmental Activities

Environmental Excellence Awards for Construction Sites

The EPA held the 2001 National Construction Site Environmental Excellence Awards Ceremony at the EPA's Central Taiwan Division on the morning of December 25th. Eighteen construction companies working on fifteen construction sites, including the Taipei International Financial Building, received awards and were praised as model enterprises to be emulated by other construction companies during the ceremony. The EPA, noting that construction projects are a major indicator of economic prosperity, emphasized that construction companies cannot neglect their responsibility to reduce pollution at construction sites.

Awards for Public Participation in Environmental Protection

The EPA held the awards ceremony for the Tenth National Model Environmental Communities and the 2001 National Environmental Excellence Awards for Specialized Environmental Personnel on December 24th. Demonstrating the importance of these awards, President Chen Shui-bian met with award winners following the ceremony. These awards are aimed at promoting environmental protection and ethical construction practices, pursuing an environmental quality that allows the public to live healthy, safe and comfortable lives, and establishing mechanisms for allowing enterprises, organizations and communities to participate in environmental activities.

EPA Promotes Battery Recycling Through Schools

The EPA, declaring war on the 10,000 kilotons of discarded dry cell batteries generated in Taiwan each year, introduced a series of activities aimed at promoting the recycling of used dry cell batteries at educational institutions on December 21st. Statistics reveal that Taiwanese consumers used approximately 10,824 kilotons of dry cell batteries (equivalent to 540 million "AA" batteries) in 2000. However, with not even 10% of these batteries recycled, it is clear that a consciousness of battery recycling has yet to develop in Taiwan. Therefore, the EPA has decided to promote battery recycling through schools. On an-

other front, the EPA has introduced its "Battery Baby Net" on the EPA recycling website, located at <http://recycle.epa.gov.tw>, in order to promote battery recycling.

Schools Awarded for Reducing Use of Disposable Dishes

The EPA held an awards ceremony for colleges and universities that have proved the most successful in reducing the use of disposable eating utensils in their cafeterias and eating facilities on December 5th. The selection process was sponsored by the EPA and co-sponsored by the Ministry of Education and National Taipei College of Nursing. Eight institutions of higher learning, including the National Taiwan University of Science and Technology, were presented with awards. Statistics show that diners dispose of an average of 22 million sets of disposable eating utensils in Taiwan everyday, and that schools and hospitals account for around 2.16 million of these discarded sets. With schools accounting for such a significant portion of this waste, the EPA hopes that Taiwan's 152 institutions of higher education will lead the way in reducing the use of these disposable utensils.

Awards Promote Office Environmentalism

The EPA presented excellence awards to 25 companies that have aggressively promoted environmental practices in their offices on December 12th. Among these award winners, Epson and the military's Combined Service Forces 204 Factory stood out for having received awards for three consecutive years. The primary purpose of these awards is to encourage enterprises and government agencies to promote environmentally friendly offices through such practices as waste reduction, recycling and greenification.

EPA Promotes Recycling Through Water Rockets

The EPA, hoping to introduce even more citizens to "the pleasure of recycling", sponsored its Water Rocket Distance Competition on December 15th. Water rockets are constructed from recyclable PET bottles and use air pressure and water for propulsion. Able to be launched into the air, they are science projects that are both fun and educational. What's more, all materials needed for construction are recyclable waste. The EPA hopes this activity will help it further promote a consciousness of recycling among kids and families.

We All Have a Responsibility to Defend the Global Environment

The EPA sponsored "The War to Defend the Earth" at Tahu Park in the Neihu District of Taipei City on December 16th. For this "war", the EPA organized thirteen games in which parent-child teams could test and develop their environmental knowledge and skills. Game topics included environmental news trivia, simple water quality tests and household poisons knowledge. The EPA hoped this activity would help improve the public's environmental knowledge and habits and assemble more forces in the fight to defend the Earth.

Toxin Control

Searchable Database for Environmental Agents Goes On Line

Now that the EPA has completed the establishment of its Searchable Database for Environmental Agents Permits and Disease Vector Control Enterprises, on-line searches regarding environmental agents just got a whole lot easier! Government agencies and the public can visit this searchable database, located at <http://www.epa.gov.tw/j/envagent/>, anytime they have questions concerning environmental agents.

The EPA completed the establishment of its Searchable Database for Environmental Agents Permits and Disease Vector Control Enterprises just last year. This searchable database system, located at <http://www.epa.gov.tw/j/envagent/>, provides such on-line services as searches regarding permits for environmental agents, searches for disease vector control enterprises and searches for authorized environmental agents dealers.

This website provides a searchable database of all legally registered environmental agents for which permits are required. The database supplies such information as the details that are to be listed on permits, a list of environmental agents enterprises and the active ingredients of environmental agents. The site also provides such functions as "and" and "or" searches, statistics and printing. For example, the public can search the database for a list of all permitted general spray insecticides that can be used to control both mosquitoes and flies or a list of bait insecticides used to control roaches. The public can search this database for legally registered environmental agents, the environmental agents procurements of disease vector control enterprises, permit applications of environmental agents enterprises and EPA permit application reviews.

Government agencies, such as environmental protection bureaus, public health bureaus, and township and city district offices, that conduct insect and rodent control, disease vector control and post-disaster disinfection work are often required to procure environmental agents such as insecticides, rodenticides and germicides.

Government agencies, when making procurements of environmental agents, can use this searchable database to make immediate queries of which environmental agents meet their special control needs or to find which agents will help avoid the build up of resistance to environmental agents that can result from the long-term overuse of the same agent in the same area. By making this information easily accessible, this database will help prevent the build up of resistance to insecticides, save control expenses and raise the effectiveness of control projects.

In addition, this database also provides information on all disease vector control enterprises that have already registered with local governments. The public can browse the database at anytime in order to find information concerning these registered enterprises. The database will thereby reduce illegal spraying by unregistered enterprises and insure the safe use of environmental agents in public areas.

The EPA states that concerning environmental agents, in addition to continuing to strive for the establishment of related regulations, conducting permit reviews, managing operations, conducting surveys and inspections, and promoting the safe use of environmental agents, it will also continue to actively improve management efficiency and implement measures for the convenience of the public.

For more information please call 02-2311-7722 ext. 2860.

News Briefs

Golf Course Development to Remain Frozen

The 90th conference of the EPA EIA Review Committee passed the *Criteria for the Review of Environmental Impact Assessment for Golf Course Development* (高爾夫球場開發環境影響評估審議規範) in December 2001. The review criteria specify that since golf course development has reached a point of saturation in northern and central Taiwan, for the sake of ecological protection and water conservation, the freeze on new golf course development applications will remain in force in these two areas. In addition, if the development of golf courses in other parts of Taiwan has a major impact on the security of national land, coastal protection, coastal ecology, or marine water quality or resources, strict preventive measures shall be taken to preserve the national interest, and golf courses shall be completely prohibited when necessary (see EPM Vol. IV, Issue 6).

Motorbike Emission Standards Revised for WTO Accession

Preparing for the environmental impact of large engine motorbikes imported after Taiwan's admission to the WTO starting this year, the EPA decided to revise Article 6 of the current *Emission Standards for Vehicular Air Pollutants* (交通工具空氣污染物排放標準), which specifies emission standards for motorbikes. According to the revised regulations, the motorbike emission standards instituted on January 1, 2002 (Phase III emission standards) and to be instituted on December 31, 2003 (Phase IV emission standards) will take engine displacement of 700cc as a dividing line. Motorbikes below 700cc will be held to the original emission standards, while motorbikes above 700cc (inclusive) will be held to Phase III standards of measured CO emission of 10 g/km and HC+NO_x emission of 2.5 g/km when running, and Phase IV standards for two- and four-stroke motorbikes of measured CO emission of 12 g/km and HC+NO_x emission of 2 g/km when running. Idle test standards and visual exhaust in-

spection standards shall be the same for both categories of motorbike.

Automotive Fuel Control Standards Tightened

Prompted by changes in objective conditions (such as improvements in the quality of widely-available petroleum products) since the *Standards for the Composition and Properties of Automobile Gasoline and Diesel Fuels* (車用汽柴油成分及性能管制標準— see EPM Vol. IV, Issue 6) were instituted in 2000, the EPA has revised gasoline and diesel fuel control standards and announced in December 2001 that these new standards will be implemented on January 1, 2002. Apart from tightening some original standard items, the new standards add the item of hexadecane index. Because the hexadecane index has an inverse correlation with aromatic hydrocarbons, requiring a low hexadecane index can indirectly control aromatic hydrocarbon emissions.

EIA

EIA Review Guidelines for Petroleum Tank Construction Passed

The EPA recently announced its new EIA review guidelines governing the construction of storage tanks for petroleum and petroleum products. These guidelines provide clear criteria for the EIA Review Committee to apply in conducting reviews of EIS and EIA reports for such development projects. They are sure to improve the efficiency and quality of these EIA reviews.

The EPA, as part of its continuing effort to implement the resolutions of the Economic Development Advisory Conference, recently announced its new *EIA Review Guidelines for the Construction of Petroleum and Petroleum Products Storage Tanks* (石油、石油產品貯存槽設置環境影響評估審議規範). These new guidelines provide clear criteria for the EIA Review Committee to apply in conducting reviews of EIS and EIA reports for such development projects. They are sure to improve the efficiency and quality of these EIA reviews.

These new EIA review guidelines, comprised of a total of 37 articles, clearly outline the review items and environmental considerations to be addressed when conducting EIA reviews for the construction of petroleum and petroleum products storage tanks.

Areas in which these guidelines prohibit the construction of petroleum storage tanks include:

forested areas of non-urban land, important reservoir watershed areas, drinking water source protection zones, water source, quality and volume protection areas for tap water, and other areas in which such development is prohibited by law.

These guidelines also provide different rules for the construction of petroleum storage tanks in special areas such as coastal areas, important habitats and special ecological systems for wild plants and animals, hillside areas, agricultural land and non-hillside areas.

The new guidelines are particularly stringent when it comes to the establishment of petroleum storage tanks in special environmental control areas. These areas include air quality control areas, groundwater control areas, subsidence areas and noise control areas. Also, risk assessments must be conducted when there are suspicions of soil and groundwater pollution at storage tank construction sites. Moreover, construction on the areas of development sites which, following an EIA review by the EPA, have been designated soil and groundwater pollution remediation areas is absolutely prohibited until all remediation work on these areas has been completed.

Recycling Certification Subsidy System to be Modified

In order to increase the efficiency of Recycling Fund management and improve the quality of recycling and disposal work, the EPA will modify the existing product and container recycling and disposal audit certification subsidy system. Executive Secretary Jen-Hsiung Hsieh (謝貞雄) of the Recycling Fund Management Committee has stated that review of the three existing certification subsidy systems has discovered that there are too many audit points among material audit certification methods. This has led to unnecessary subsidies, inflated administrative

costs, and has caused persistent administrative inefficiency. The EPA has therefore decided to require that all certification and subsidy fee procedures for all waste and container recycling be conducted together at recycling facilities. Modification of waste plastic container and waste electronic/electrical goods operating procedures were scheduled to be completed during the first stage, which was to conclude before the end of 2001. Waste motor vehicle and waste lubricating oil handling procedures will be gradually modified during the second stage, which begins in 2002.

Enterprises constructing petroleum storage tanks are required to adopt and establish the following environmental management measures and facilities in order to prevent pollution: automatic continuous monitoring facilities for volatile organic compounds (VOC), petroleum vapor recovery and treatment facilities, soil gas and groundwater monitoring plans, treatment of surface washing water and of initial runoff from rainfall, countermeasures for the environmental impact of development-related traffic volume, and environmental protection implementation plans for construction.

After construction is completed and storage tanks begin operating, operators must have in place various working procedures and response plans related to public safety and disaster prevention guidelines. These include rules for the placement of oil storage tanks, regulations for the construction of petroleum retaining walls, disaster risk assessments and response measures, environmental management and emergency response plans, safety guidelines and penalties for petroleum tanker trucks.

For more information please call 02-2311-7722 ext. 2740.

Waste Management

Permit Regulations for Waste Disposal Organizations Simplified

The EPA has recently announced the *Permit and Management Regulations for Public and Private Waste Clearance and Disposal Organizations*. These regulations, formulated based on the newly revised *Waste Disposal Act*, will strengthen the management of public and private waste clearance and disposal enterprises. These regulations not only promote the spirit of local government autonomy, but also protect the rights of enterprises by relaxing some waste reuse restrictions. Ultimately, in addition to providing greater convenience by simplifying permit application procedures for waste clearance and disposal organizations, the regulations will also facilitate the review of permit applications by government agencies.

In the wake of the enactment of the *Management and Assistance Regulations for Public and Private Waste Clearance and Disposal Organizations* (公民營廢棄物清除處理機構管理輔導辦法 see EPM Vol. IV, Issue 4), the EPA announced the *Permit Management Regulations for Public and Private Waste Clearance and Disposal Organizations* (公民營廢棄物清除處理機構許可管理辦法) in late November. These new regulations, based on the revised *Waste Disposal Act*,

Old Motorbike Replacement Subsidies Aim to Reduce Air Pollution

The EPA, as part of its efforts to reduce air pollution, announced the most up-to-date *Old Motorbike Replacement Subsidy Implementation Guidelines* (老舊機車汰舊換新補助方案執行要點) in December 2001. These guidelines will speed up the replacement of old high-pollution motorbikes by offering subsidies for the purchase of new

low-pollution motorbikes. Starting in 2002, anyone who disposes of a motorbike produced before December 31, 1997 and purchases a new low-pollution fuel injection motorbike may receive an NT\$4,000 subsidy from the EPA (this subsidy includes NT\$3,000 from the Air Pollution Fund and a NT\$1,000 recycling refund from the Recycling Fund). Subsidies shall be issued from the date of announcement until November 30, 2003.

stipulate that waste clearance and disposal organizations must apply for and obtain waste clearance and disposal permits from the issuing authority in the organization's place of business before they may accept commissioned waste clearance and disposal work. As for permit issuing authorities, the regulations comply with the spirit of local government autonomy by allowing competent authorities in special municipalities and counties (cities) to issue permits. In addition, the EPA may entrust the issuing of permits to other organizations. Permits shall have a five-year period of validity.

These new regulations redefine the operations to be conducted by waste clearance organizations as the transportation of waste to designated disposal sites and facilities. Also, whereas in the past an enterprise wishing to conduct both waste clearance and waste disposal operations was required to submit separate applications for each of these operations, the new regulations simplify procedures by allowing these enterprises to submit a single application for permission to conduct both of these operations. These revisions will benefit the operations of these organizations and the management of these organizations by the government.

Review deadlines and rules for each type of permit application have also been added in accordance with the *Administrative*

Procedures Act in order to protect the rights of waste clearance and disposal organizations. There are a number of regulations aimed at providing greater convenience to these organizations. For instance, in order to simplify application procedures, waste clearance and disposal organizations may now present test run plans when applying for establishment approval. Limits on operating areas have been eliminated from clearance and disposal permits so that these organizations are no longer restricted as to where they may operate. These regulations also simplify procedures for applying for partial modifications to permits. This will not only prove more convenient for these organizations, but will also facilitate the government's application review process. Restrictions on the operations of clearance and disposal organizations have been clarified and some waste reuse restrictions have been relaxed.

The formulation, promulgation and implementation of these management and assistance regulations and permit management regulations demonstrate that Taiwan has already completed the establishment of regulations for the management of waste clearance and disposal organizations. With these regulations in place, the EPA will step up its crack down on illegal organizations and those that violate regulations in order to guarantee that the environment is kept clean for the people of Taiwan.

EIA

EIA Review Guidelines for Cultural-Educational and Medical Development Passed

The EPA recently announced EIA review guidelines for cultural-educational and medical construction projects. In addition to the standard requirements of EIA reviews, these review guidelines place a special emphasis on environmentally conscious construction practices, forest restoration and wastewater treatment. These guidelines are intended to insure that cultural-educational and medical development projects have the special characteristics appropriate for such developments and to protect the surrounding environment and natural scenery.

The EPA formally announced *Environmental Impact Assessment Review Guidelines for Cultural-Educational and Medical Construction Projects* (文教、醫療建設開發環境影響評估審議規範) in December. These guidelines, which put some of the resolutions of the Economic Development Advisory Conference into action, will improve the quality of EIA reviews and prevent and reduce the negative impact of these development projects on the environment.

Providing clear rules for reviewing EIA for cultural-educational and medical development projects, these guidelines place special emphasis on the following six factors:

1. Physical and chemical factors (topography, geology, air

quality, hydrology, water quality, vibration and waste)

2. Ecological factors (habitats and environments of terrestrial and aquatic plants and animals)
3. Scenic and recreational factors (recreational resources)
4. Social and economic factors (local population, industry, land usage, impact on public infrastructure and traffic, and the opinions of local residents)
5. Cultural factors (ancient relics, historical sites and historical architecture)
6. Other environmental factors

In addition to the above factors, EIA surveys and data collection for cultural-educational and medical construction projects must be conducted in accordance with the *Environmental Impact Assessment Criteria for Development Projects* (開發行為環境影響評估作業準則). Also, land preparation for construction at development sites should be conducted in stages over different sections of the sites so that the total area of exposed land does not exceed two hectares during construction.

Cultural-educational and medical construction projects are not permitted when they are to be located in one of the following four areas: 1) forested areas of non-urban land, 2) drinking water source protection zones and areas within a certain distance of drinking water intake points, 3) important reservoir watershed areas, and 4) areas in which such development is prohibited by a competent government agency or by law.

In addition, these new EIA review guidelines require developers to draw up specific supervision and

safety management plans for laboratories and examination rooms at cultural-educational and medical developments due to hazardous waste and safety concerns.

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Publisher

Dr. Lung-bin Hau, Administrator

Publishing Directors

Juu-en Chang, Ta-hsiung Lin, Yeong-ren Chen

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Executive Editors

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Environmental Policy Monthly
Environmental Protection Administration
Office of Science and Technology
Advisors
41, Sec. 1, Chung-Hwa 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

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