

Environmental Policy Monthly

Volume I, Issue 10

April 1998

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Water Pollution Fee to be Postponed

According to EPA Administrator Hsung-Hsiung Tsai, public opinion following announcement of the *Regulations Governing Water Pollution Control Fee Collection* maintains that neither households nor those who meet water discharge standards should pay the fee. The sentiment comes in stark contrast to the original principle that those who discharge wastewater should in general pay the fees while those who meet water quality standards should not.

In preparing their budgets for FY1999, local-level environmental agencies anticipated funding to come from collection of the water pollution fee. Without a consensus being reached in the near future, amendments to the *Water Pollution Control Act* looks unlikely to pass this year, leaving local authorities with no fee revenues to carry out their water pollution prevention work. The EPA, therefore, decided to postpone levying the water pollution fee until a consensus is reached and discussion can resume.

The EPA's Bureau of Water Quality Protection indicated that the date for implementing the draft *Regulations Governing Water Pollution Control Fee Collection* will be announced separately by the EPA. There is no set timetable for when collection of the water pollution fee will begin.

Controls on IC Industry Air Emissions to be Tightened

The Union Chemical Laboratories (UCL) of the Industrial Technology Research Institute (ITRI) was recently commissioned by the EPA to draft the *IC Manufacturing Industry Air Pollution Control Scope and Emission Standards*. On March 12, the EPA called together academics and members of industry to engage in discussions.

The EPA said that according to UCL data, there are currently about 35 wafer manufacturing and packaging companies in Taiwan with collective annual revenues of NT\$150.8 billion. These companies emit several different types of air pollutants through the use of substances such as acids, organic solutions, and toxic gasses. Given that many of these pollutants are harmful to human health and air quality, it is imperative that controls be tightened.

After looking into foreign standards, UCL suggested that future targets of the *IC Manufacturing Industry Air Pollutant Controls Scope and Emissions Standards* include wafer manufacturing and packaging companies. UCL recommended that targeted pollutants include volatile organic compounds (VOCs) and inorganic acids (see table for the emissions reduction rates and total volumes of these items). UCL also added an independent category to the table for trichloroethylene due to its relatively high toxicity.

As business representatives and academics continue to hold differing views on the proposed standards, the EPA's Bureau of Air Quality Protection and Noise Control said it will set more reasonable limits after soliciting additional opinions.

IC Wafer Manufacturing Emissions Standards (draft)				
Pollution Source	Pollutant	Emissions Standards		Implementation Date
		Reduction rate (%)	Total volume of emissions (kg/hr)	
Existing sources	VOCs	90	0.6	January 1, 1999
	Trichloroethylene	90	0.02	
	Nitric, Hydrochloric, Phosphoric, & Hyrdofluoric acids.	95	0.6	
	Sulfuric acid	95	0.1	

Several Environmental Regulations to be Relaxed

Since the EPA launched its drive to streamline laws and regulations, suggestions have already been submitted from the EPA's Legal Affairs Committee, and the Bureau of Performance Evaluation and Dispute Settlement, and other bureaus. Recently, EPA Deputy Administrators Yi-Hsiung Wu and Ta-Hsiung Lin jointly held a review

discussion to confirm the direction of the streamlining policy and the areas it will affect.

In terms of air pollution permitting, the EPA decided to review the scale and type of companies that should apply for a permit. The type and scale of companies required to appoint specialist units or personnel will also be re-evaluated.

In its review of water pollution permitting, the EPA decided that it should be modeled after the air pollution system whereby only companies designated through formal EPA announcement are required to apply for a permit. However, as this involves a revision of the law, it remains a long-term goal. To shorten the permitting examination process, the EPA decided to exempt engineering projects from submitting reports to central authorities. Business in the midst of implementing improvement projects or undergoing trial runs will no longer be required to submit progress reports or register modifications every 90 days. In terms of the monitoring and testing system, the current requirement to contract a qualified testing organization to handle testing will be replaced with self-administered testing, however qualifications must be certified. Wastewater storage and dilution reports will be required on a quarterly rather than a monthly basis. The endorsement system for changing water pollution control plans will also be simplified. A certified engineer will no longer be required to sign-off on the plans if no changes were made to the documentation.

In terms of waste management, Article 10-1 of the *Waste Disposal Act* already includes recycling, collection, and treatment guidelines, as well as auditing and certification systems. The EPA, therefore, has decided to eliminate regulations that require companies in the recyclable materials collection business (as regulated under the Article 10-1 of the Act) to obtain a Type II collection permit. Whereas the re-use of general waste materials currently requires the approval of both local and central competent authorities, the EPA now requires that only approval of the central competent authority be required. The local competent authority, however, should be involved in the review process.

The qualification requirements for technical personnel involved in waste collection and treatment will also be relaxed. Under current regulations, Level III and II technicians with two years of experience can be upgraded to Level II and Level I, respectively. The EPA decided that, in the future, the required experience for upgrading from Level II to Level I will be reduced to one year.

Procedures involved with the changing of testing and monitoring permits will also be streamlined. The EPA will no longer require the name of the responsible person and address of the testing laboratory to be included on the permit. The penalties for failure to carry out responsibilities or update the institution address on time will also be eliminated. The period of time for reviewing the permit of a testing and monitoring organization will be reduced from 140 days to 110 days. In terms of overseeing motor vehicle testing and monitoring organizations, the EPA decided that those who fail annual inspections would be given a second chance. A second failure to meet the standards will, however, result in revocation of the permit without a prior warning being issued.

The system for managing certified environmental specialists will also undergo change. The EPA has decided to change the current situation where specialists are responsible for both the management and equipment operation sides of pollution prevention. In the

future, these duties will be separated and the category and scale of businesses that should appoint certified specialists will be re-evaluated according to this principle.

EPA Readies Targets and Schedule for Controls on Greenhouse Gas Emissions

As the MOEA's Energy Conference in May draws near, the EPA has laid out Taiwan's targets, timeframe and strategy for controlling greenhouse gas emissions, and will hold numerous discussions to obtain the views and build consensus among all concerned parties.

After analyzing international trends following the Kyoto Protocol last year, the EPA reported that industrialized nations will inevitably insist on continued discussions over the responsibilities of developing nations. Although Taiwan is currently not obligated to reduce emissions, its experience with past international environmental protection treaties has shown that failure to comply with the agreements made would be met with sanctions.

As many countries begin to apply the terms of the Protocol, and develop high efficiency technology, any delay in Taiwan's response could weaken national competitiveness. Furthermore, according to the experience of many nations, adjusting the national energy structure and industrial policy requires about 10 to 15 years. Therefore, Taiwan should act quickly so as to soften the impact these changes may have on economic development.

However, if Taiwan were to follow the reduction schedule followed by OECD nations, its reduction amounts would much greater than that of OECD nations. This is because Taiwan's CO₂ emissions have increased much more rapidly than those of OECD nations over the past several years. Whereas a 5.2% greenhouse gas emission reduction rate for OECD nations will cut their per capita CO₂ emissions from 12.14 tons in 1990 to 11.5 tons in the year 2000, Taiwan's emissions will reach only an estimated 10.03 tons by that time. Taiwan is therefore proposing that emission levels in 2000 be used as the base year for reductions and that this level be achieved by 2020. To provide flexibility, emissions volume targets and implementation schedules will be afforded margins of 10% and 5 years, respectively.

The EPA indicated that according to the aforementioned reductions targets and timeframe, Taiwan's total annual CO₂ emissions volume could be predicted, with the total amount then "distributed" among different sectors such as business, transportation, agriculture, energy conversion, and industry. Relevant government agencies shall estimate the emissions status and the most feasible reductions technology of each sector, and during a 5 year period, achieve the total volume limit targets for each sector.

The EPA suggests that the housing and business sector adopt environmentally friendly "green" lighting, resource efficient architectural structures, and the "Energy Star" plan to reach objectives. Transportation sector measures include raising energy efficiency, using of clean fuels, and strengthening transportation management.

Within the industrial sector, industries should control their power generation capabilities. The EPA recommends that manufacturers who fail to meet standards be

encouraged to improve energy efficiency through administrative measures or economic incentives.

According to the Director General of the Bureau of Air Quality Protection and Noise Control, Hsiung-Wen Chen, the EPA will hold several public discussions to collect the views of all parties and build consensus. To control greenhouse gas emissions, it was recommended that new laws be set. Once a consensus over total volume controls is reached, it will become the basis for use by all government departments to lay out their greenhouse gas reduction measures.

1998 Computer and Household Appliance Recycling Fee Rates Announced

On February 27, the EPA announced the computer and home appliance recycling fee rates for 1998 (see table).

According to the Waste Electrical Appliances Recycling Fund Management Committee, recycling rates are calculated according to recycling, collection, and treatment costs per unit multiplied by this year's estimated recycling volume (30% of 1998 sales volume). After calculating the total recycling costs, and distributing them over this year's estimated sales volume, 10% administration costs are added. More than NT\$470 million in funds will be collected this year based on a targeted recycling rate of 30%. The committee also said that beginning in 1999, rates will be set according to product size and volume.

In terms of discarded computers and other waste information technology products, the Waste Computer Fund Management Committee's waste computer collection and treatment costs include reprocessing, user reward money, recycling company reward money and other expenses. It is estimated that 700,000 to 970,000 waste computers will be recycled in 1998.

Furthermore, the Fee Review Committee decided that, if recycling funds are insufficient, the various fund management committees should readjust the fee rates and send them to the Fee Review Committee for deliberation. If fees are not adjusted, the EPA should directly announce the rates. Currently announced rates should only be considered temporary.

The Fee Review Committee also decided to require that other information technology products such as modems, printers, scanners, and palmtop computers be recycled. It further suggested that the Fund Management Committee conduct a review on its own initiative and produce a list of products that should be recycled.

1998 Computer and Home Appliance Recycling Fee Rates		
	Item	Rate (NT\$/unit)
Computer-related items	Notebook computer	200
	Motherboard	75
	Hard drive	75
	Power supply	12.5

	Housing	12.5
Household appliances	Refrigerator	220
	Television	150
	Washing machine	154
	Air conditioner	170

OECD, EU States Prohibited from Shipping Hazardous Waste to Other States

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was adopted in 1989 and entered into force on 5 May 1992. This global environmental treaty strictly regulates the transboundary movements of hazardous wastes. On February 23 to 27, 1998, the Fourth Meeting of the Conference of the Parties to the Basel Convention (hereinafter referred to as the “Convention”) was held in Kuching, Malaysia.

Attendees from Taiwan included representatives from the Industrial Development Bureau and Board of Foreign Trade (both under the auspices of the Ministry of Economic Affairs), as well as the EPA. After 5 days of discussion among representatives from parties to the convention, several important decisions were made. The following is an overview:

- I) Waste Item Lists A and B, developed by a Technical Working Group, were approved and formally established as Annexes to the Convention. Their content includes the following:
1. List A: Established as Annex VIII to the Convention. Any waste material included on List A will be considered hazardous waste and controlled by the Convention. This list includes 59 items.
 2. List B: Established as Annex IX to the Convention. Any waste material included on List B will not be controlled by the Convention. This list includes 53 items.

This series of decisions forms the basis for executing decision III/1 (made during the Third Meeting of the Conference of the Parties in 1995). From December 31, 1997, the transboundary movement of any List A waste material from countries listed in Annex VII of the Convention to countries not listed in Annex VII is prohibited. Annex VII countries include OECD and European Committee member states and Liechtenstein.

- II) Parties to the Convention are strongly urged to execute decision III/1 as soon as possible. The resolution stipulates that OECD and EU member states and Liechtenstein can no longer move hazardous waste included on List A to countries outside of these regions.
- III) The contents of Annex VII may not be amended prior to the execution of decision III/1 by parties to the Convention. Dissenting nations, including Israel, Monaco, and Slovenia, requested that they be added to the list of countries in Annex VII.

IV) Nuclear waste material shall continue to be regulated according to International Atomic Energy Association (IAEA) management guidelines, and will not conflict with the contents of the Convention.

According to EPA Bureau of Solid Waste Control officials, the resolution means that all hazardous waste materials included in List A that are generated by OECD and EU member states and Liechtenstein cannot be shipped to Taiwan. Whereas the resolution is beneficial to the protection of Taiwan's environment, it will negatively affect companies that import hazardous waste for use as secondary raw material.

In response to the convention, officials indicated that over the short-term, the MOEA should strengthen guidance to industries related to hazardous waste import in order to soften the potential economic impact. In support of the resolution, the list of hazardous items under local import controls and related regulatory controls should be amended. Over the long-term, the MOEA should strengthen assistance to local industries so that they eliminate reliance on foreign waste material for use as raw materials. The resulting greater reliance on locally produced waste material should benefit local resource waste recycling activities.

Amendments of EIA Act Enforcement Rules Pave Way for EIA Certification System

To establish an EIA certification system that will simplify the EIA review process, the EPA plans to amend the *Environmental Impact Assessment Law Enforcement Rules*. According to current regulations, the EIA's general assessor and the author of environmental impact items shall possess either specialized academic credentials related to the EIA's content or a minimum of two years work experience. The qualifications for the certified assessor are clearly defined in the draft (see table). Proof of qualifications should be submitted along with either the environmental impact statement (EIS) or within an initial draft of the EIA.

If sufficient proof is provided that a professional general assessor performed the EIA, the draft stipulates that the competent authority may skip over the initial application review, required by the *Work Procedures Governing EIAs for Development Activities*, and proceed directly with the actual review. However, if the competent authority finds that the certification documents do not meet regulations, the competent authority may, according to the circumstances, issue a warning to the aforesaid assessor or conduct a strict EIA review according to procedure. General Director of the Bureau of Comprehensive Planning, Shi-Biao Ni, has indicated that these changes will cut about 10 days off time required for EIA review.

The draft also clarifies which competent authorities should be involved in reviewing a given case. The draft stipulates that if two or more development activities involving changes to non-urban land use are included in a single EIA, and the various activities have different competent authorities, then the competent authority of overseeing land use would prevail. However, all competent authorities of a target industry shall continue to track the EIA process.

Simplifications have also been made to the procedures for when development activities do not begin shortly following EIA approval. According to current regulations, a developer shall submit an environmental reassessment report if a development activity starts more than three years after receiving the development permit. Because the time it

takes to issue a permit is unpredictable, the length of time from when the EIA is completed to when development actually begins varies widely from project to project. To standardize the process, the draft has been amended to require an environmental reassessment report if development activities start more than three years following approval of the EIA, not three years following the granting of the development permit.

Certified Assessor Qualifications (draft)	
General Assessor	<ul style="list-style-type: none"> ● Possess a professional environmental engineering certificate from home country and have over three years EIA work experience. ● Possess a bachelor’s degree or higher in a field related to environmental impact studies; have over three years EIA work experience and over forty qualified and proven hours of professional EIA training¹. ● Possess a bachelor’s degree or higher in a field related to environmental impact studies and have over five years EIA work experience.
Impact Items Author	<ul style="list-style-type: none"> ● Possess a professional engineering certificate (can include architecture) from home country in a field related to environmental impact studies. ● Possess a bachelor’s degree or higher in a field related to environmental impact studies. ● Possess a professional degree (higher than vocational school) in a field related to environmental impact studies; have over two years of EIA work experience or over 30 qualified and proven hours of professional EIA training¹.
¹ Professional training must be conducted by the central competent authority or an institution or group designated by such authority.	

Local Governments Authorized to Delineate Water Source Protection Zones

According to Article 5 of the *Drinking Water Management Statute*, certain development activities will be prohibited in drinking water source water quality protection zones and regions within a certain distance of drinking water collection points (hereafter both will be referred to as “protection zones”). The scope of the protection zones and specific distance from water collection points will be set by the provincial (municipal) or county (municipal) competent authority before May 21, 1998, and officially announced following EPA approval.

Since the *Drinking Water Management Statute* was amended in May, 1997, the EPA has moved swiftly to delineate the protection zones. On February 10, the EPA announced Article 12 of the *Drinking Water Management Statute Enforcement Rules* which clearly defines protection zones as follows: 1) the entire land area within the watershed boundary of a drinking water source designated as a Type A water body; or 2) the entire land area within the watershed boundary above an existing or planned reservoir or dam serving as a drinking water source.

As the delineation of the protection zones is closely tied to public interest, local governments held 51 public discussions and 50 surveys throughout local areas to consider the question of present water quality and future enforcement. They indicated that the method for delineating protection zones should be based on the adoption of

controls appropriate to the region and set according to actual conditions. Use of rigid principles in delineating protection zones will only restrict the authority of local governments to manage them. Apart from protection zones, regulations governing pollution of rivers and reservoirs still includes such environmental protection tools as the *Tap Water Act*, *Mountain Slopes Conservation*, *Soil and Water Conservation Act*, and *Forest Act*, etc. To encourage local governments to weigh the pros and cons of water protection objectives and controls and adopt regulations according to region and authority, the EPA amended the *Drinking Water Management Statute Enforcement Rules* authorizing local governments to delineate protection zones according to local conditions.

According to EPA Deputy Administrator Ta-Hsiung Lin, not all drinking water sources necessarily require delineation as a protection zone. For example, by incorporating the unique characteristics of a river basin into a specific control measure, the goal of protecting water sources can also be achieved. Lin also noted that among the many control measures available, the EPA is responsible for selecting those with the lowest social costs.

According to Bureau of Water Quality Protection officials, water source protection in the future will return to overall planning based on the concept of water quality. This will include the adoption of control measures according to region and authority and additional concrete measures for surface run-off water treatment, sewage treatment facilities, and the delineation of total volume control and drinking water protection zones. Furthermore, the *Kao-Ping River Water Source Water Quality Protection Implementation Plan* currently being drafted by the EPA will be the first plan to demonstrate the new policy of separately setting water quality objectives and strategies for separate regions.

Polluted Ground Water Treatment Procedures Being Drafted

As Taiwan currently has no regulations to prevent groundwater pollution, the EPA drafted the *Groundwater Pollution Treatment Procedures* to ensure that all groundwater pollution cases controlled by environmental agencies are well founded. On March 2, the EPA called environmental agencies from all levels of government together to engage in discussions.

According to the draft, the public indicated that groundwater pollution cases may be classified into three scenarios: 1) groundwater contamination or lack thereof confirmed; 2) groundwater contamination confirmed and polluter identity confirmed; or 3) groundwater pollution confirmed but polluter identity unconfirmed.

Under Scenario 1, the relevant environmental agency may, according to Article 25 of the *Water Pollution Control Act*, require an explanation of the contamination from the suspected polluter(s) within 15 days and, when necessary, investigate soil and groundwater quality.

If the relevant environmental agency has confirmed groundwater contamination and polluter identity (Scenario 2), the agency shall establish a special taskforce within one month. It may also require that the polluter investigate the state of groundwater pollution, public use patterns of the groundwater, and the source of groundwater

contamination (see table for details) according to Article 26 of the *Water Pollution Control Act*.

Furthermore, the agency may require that the polluter adopt emergency measures. These include estimating potential risk and scope, informing the public that the groundwater is polluted and not potable, assisting water utility companies with tap water connections, and installing pollution source emergency cut-off measures. In terms of improvements and repairs, polluters must carry out the remediation and clean-up of groundwater and soil, and should formulate and carry out the monitoring of this work.

Environmental agencies, therefore, must collect related information from the polluting company regarding relevant responsible individuals, equipment, and land under ownership and/or use. According the Procedures, environmental agencies should adopt the following measures:

1. Coordinate with polluter to establish treatment standards.
2. Check the accuracy of all information provided by polluter.
3. Review the reasonableness of emergency handling and pollution treatment work.
4. Monitor treatment work and confirm treatment completion.
5. Adopt measures to ensure that polluters are held responsible. For example, instruct the relevant competent authority to temporarily halt the breakup or liquidation of a company; or instruct the local competent authority to recommend that an impact assessment be conducted before land is modified.

If groundwater contamination has been confirmed, but polluter is unconfirmed, (Scenario 3), the relevant environmental agency shall carry out an investigation of the contamination source, public use patterns of the groundwater, and pollution spread. If identified, the polluter must carry out follow-up emergency handling, and pollution treatment and related work. Otherwise, the relevant environmental agency will continue to be responsible for the follow-up handling work.

<i>Groundwater Pollution Items for Investigation (draft)</i>	
<i>Groundwater Contamination Status</i>	<ul style="list-style-type: none"> • <i>Pollutant type.</i> • <i>Groundwater pollutant distribution; water quality.</i> • <i>Soil pollutant distribution and concentration.</i> • <i>Water-table position and flow.</i>
<i>Groundwater Contamination Origin</i>	<ul style="list-style-type: none"> • <i>Records indicating volume, nature, and types of waste material from facility.</i> • <i>Records indicating content, volume, operational status of process equipment, and discharge circumstances of wastewater from facility.</i> • <i>Records of stored material monitored for leak detection; leakage circumstances.</i> • <i>Records of past and present type, nature, and volume of materials used by facility.</i>

News Briefs

Natural Gas Storage Tanks and Gas Stations to be Excluded from VOC Controls

To avoid practical difficulties of implementation and encourage businesses to use clean fuels, the EPA plans to exclude natural gas storage tanks, gas stations, and certain VOC sampling procedures from the scope of the *Volatile Organic Compounds Air Pollutant Control and Emissions Standards*. The scope of VOC controls on the storage tanks of gas stations will be set separately.

Discarded Tires and Waste Lubricants to be Used as Fuel

On March 2, 1998, the EPA announced discarded tire and waste lubricant “resource factories” and related regulations. Apart from their use in making refined oil products, waste lubricants can also be used as fuel in cement and steel factories. Discarded tires, apart from their use in making bricks, rubber powder and reprocessed (retread) rubber, can also be used as fuel at cement plants and by steam-electric co-generation equipment. Factories that use waste lubricants or discarded tires as fuel must install equipment that continuously monitors stationary pollution sources. Combustion equipment and waste gas emissions shall be checked and approved by the local competent authority.

EPA Plans to List Household Appliance Polystyrene Packaging as a Mandatory Recycling Item

The EPA is currently studying how to add household appliance polystyrene packaging to the list of items targeted for mandatory recycling under Article 10-1 of the *Waste Disposal Act*. Home appliance manufacturers would be responsible for reprocessing or recycling waste polystyrene packaging. This waste packaging would be classified as industrial waste and regulated as such.

Government Policy EIA Performance Criteria Announced

On March 11, the *Criteria for Performing Government Policy EIAs* was announced. Following indication of which activities must undergo policy EIAs, assessment items must include considerations of environmental loading; impacts on natural ecosystems and on human health and safety; natural resource usage; impacts on water resource system and uses; effects on natural scenery; and relationship to international standards.

Draft of Policy EIA Items Initially Confirmed

The EPA has already confirmed a draft of government policy EIA items (see table) to be sent to the Executive Yuan for approval.

1998 Recycling Rate Targets for Waste Lubricants and Other Items Announced

On February 26, the EPA announced the 1998 recycling rate targets (see table) and calculation method for spent lead batteries, discarded tires, waste lubricants, and agrochemical waste containers. If the recycling rates fall below the lower limit, the EPA may consider raising the fee rate. If above the upper limit, the EPA may lower the fees.

1998 Upper and Lower Recycling Rate Targets for Specially Designated Waste Items and Containers			
Item	Calculation Method	Upper Limit	Lower Limit
Spent lead batteries	Current year's recycling volume / current year's sales volume	75%	40%
Discarded tires	Current year's recycling volume / 1996 sales volume	Recycling rate: 90% Processing rate: 70%	
Waste lubricants	Current year's recycling volume / (current year's sales volume X 0.21)	70%	
Waste pesticide containers	Current year's recycling volume / current year's sales volume	70%	

EPA to Provide Dioxin Testing Technology Assistance

Once twenty-one publicly constructed incinerators and the first group of privately constructed incinerators come on line, the annual market for dioxin testing and analysis will be worth about NT\$50 million. The market will be even larger once a second group of general waste and industrial waste incinerators reach completion. According to the EPA's National Institute of Environmental Analysis, there are still no testing and monitoring organizations with dioxin testing capability in Taiwan. The EPA will therefore provide analysis technology assistance to testing organizations willing to apply for dioxin testing certification.