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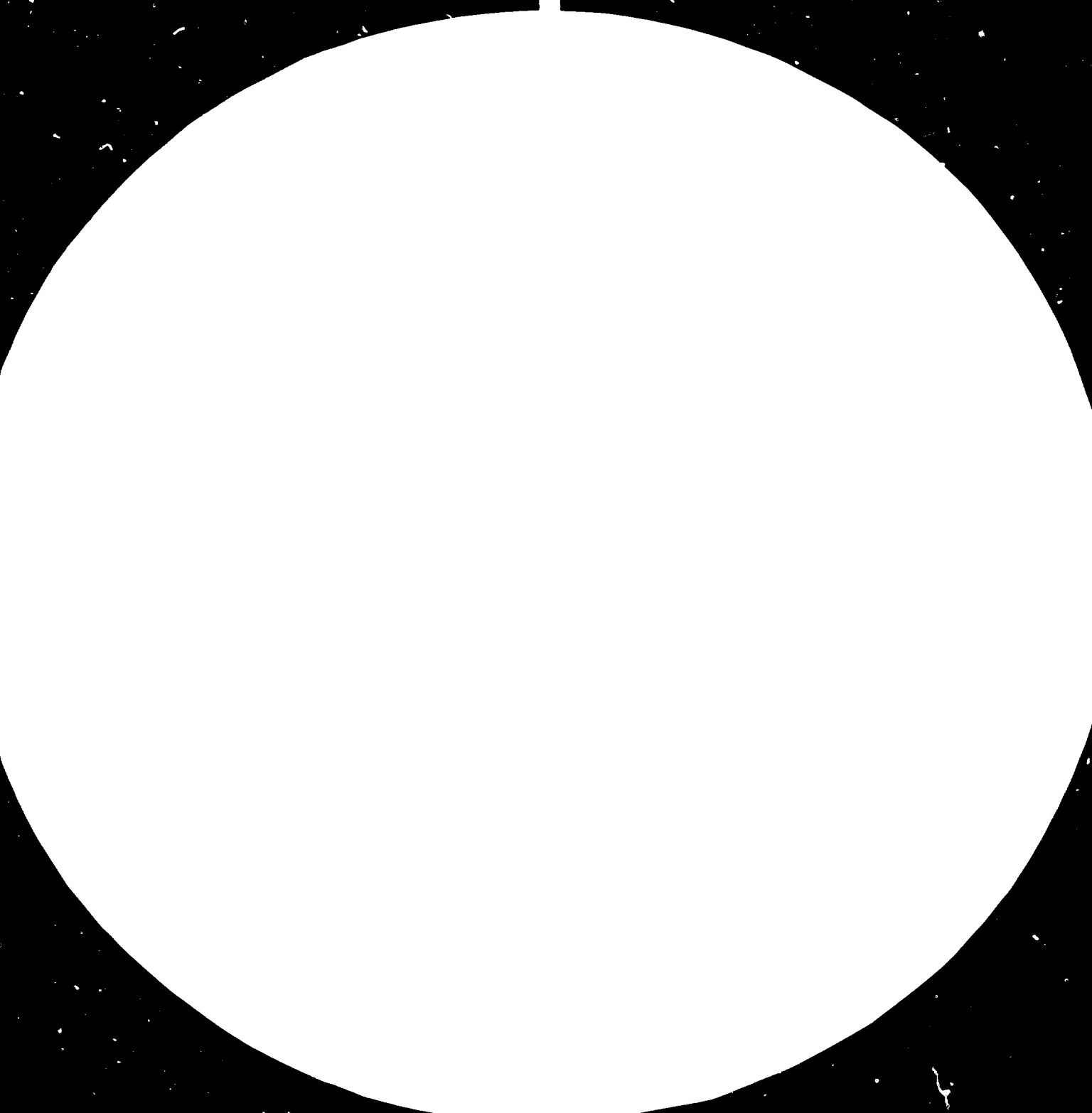
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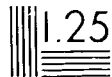
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UNITED NATIONS ENVIRONMENTAL PROGRAMME STATEMENT *

by

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Judging from the list of participating countries in this meeting, it is obvious that the pulp and paper industry has emerged as one of the most vital basic industries in developing countries.

Since the past decade, countries all over the world have recognized that the ultimate value of any industrial development scheme must be judged by its contribution to society in the long run. To be able to ensure sustainable development, due regards must be given to the environmental impact of industrial activities.

My own observation confirms my belief that the pulp and paper industry can and often plays the leading role in introducing environmental protection measures. A major pulp and paper manufacturer in Rajauri Province, Thailand has been at the forefront in institutionalizing in-plant environmental units to manage its wastes. In recent years, this company has initiated a pilot study on the use of effluents for irrigation in the nearby sugar plantation. This has proved beneficial to the image of the industry as a whole.

In the more industrialized countries, pollution control strategies are increasingly focusing on specific pollutant parameters in addition to biological oxygen demand and suspended solids removal. Some of the new developments and trends in control technologies in these countries are:

- o A gradual shift to use of activated sludge treatment as a result of growing space limitations on aerated basin usage. Simultaneously, there has been a substantial increase in the use of oxygen-assisted activated sludge treatment, the choice in liquor oxidation, oxygen bleaching and oxygen-assisted lime kiln firing at kraft mills. However, although certain process advantages are claimed for oxygen-assisted activated sludge treatment, these have not been fully confirmed in practice, although such efforts are in progress.
- o A pronounced trend away from vacuum drum filtration toward pressure plate, and more recently, pressurized moving belt filters.

- o With greater regulating stress on protecting local ground water with potable water supply potential, as well as a desire to achieve optimal use of available land disposal sites, there is a trend for a higher degree of engineering attention, such as leachate collection for recycling, with regard to land disposal of sludge.
- o For odour control, because of continued success, technological attention has shifted from the kraft recovery furnace to the lime kiln.
- o It is also a well-recognized concept that the best method in treating waste is to reduce the amount of waste itself by improving in-process techniques.

Some of the measures are:

- o Improvement engineering systems to achieve further reduction in the carry-out of pulp liquor solids in wasted pulp.
- o Development of designing systems capable of detecting process material losses, segregating them for later chemical recovery and employing computerized control features to minimize operator judgement for achieving optimal operation of storage facilities.
- o Increasing knowledge on environmental capability for assimilating discharges. Experiments, using fish productivity as measurement criteria, are being carried out in carefully controlled studies to determine discharge levels of bleached and unbleached pulping effluents. The programme also includes supplemental studies of bio-accumulation, reproductivity capability and significance of food system alterations and is being expanded to consider a broader range of climatic environments, aquatic populations and industry categories.

One of the mandates of the United Nations Environment Programme (UNEP) is to collaborate with countries, both government and industry in reducing the adverse impact of industries on the environment. UNEP through the F.V.L. Consulting Company of Sweden, and in cooperation with the Swedish International Development Agency (SEDA) is preparing a set of comprehensive reports on the environmental management of the pulp and paper industry which would cover:

- 1) Air and water pollutants in the pulp and paper industry.
- 2) In-plant measures in raw material preparation, mechanical, chemi-mechanical and sulphite pulping.

- 3) In-plant measures in sulphate and soda pulping.
- 4) In-plant measures in paper-making and deinking.
- 5) External measures and alternate uses of effluent.

These publications will be ready for circulation run-in early next year. On top of this, UNEP is preparing for distribution:

- o Guidelines on environmental parameters, sampling and analytical methods in the pulp and paper industry.
- o Thesaurus on pulp and paper environmental terminology.

In order to assist UNEP in this undertaking, we have established a UNEP Environmental Consultative Committee on Pulp and Paper Industry which consists of experts from the industry and government sectors of thirteen countries. This includes Mr. Judt, Mr. Kyrklund and Mr. Picornell of PICOP. The third meeting of this group will be held three weeks from now in Sao Paulo, Brazil with the cordial collaboration of Mr. Rodes to finalize the reports and publications which I mentioned earlier.

UNEP realizes that the accumulation of knowledge is only the first step toward solving any environmental issue. The more important step is to make this information available to all interested parties. Hence, UNEP has established a computerized data base on industry and environment covering the pulp and paper industry. I have distributed a brochure of this programme for your perusal. This computerized system is open to all users, both government and the private industry. Its objective is to provide sources of information on environmental issues related to industry. We would like to invite you to make use of this system which is at your disposal.

In conclusion, I would like to emphasize two important emerging trends of the pulp and paper industry toward a broader definition of environmental concern.

The first involves a growing perception of the industry as a forest products totality, integrating forestry operations, pulp, paper and wood products manufacturing, secondary conversion of paper and wood products, and recycling of consumer-used material in manufacturing operations.

In the past few days, we have heard of the necessity of the pulp and paper industry to be involved directly in forest replantation. I welcome this as a positive step by which the research and development generated by the pulp and paper industry could help governments in their reforestation programmes. As you may be aware, tropical

forests as a natural resource are fast dwindling. In fact, for Asean countries, the depletion of forest resources is among the most important environmental issues of the region.

The second trend concerns the increasing public awareness of the environmental health effects related to industrial activities. To a growing degree, the term environment encompasses not only the general environment but also the working environment of employees. This trend is reflected in both legislative enactments and regulatory programmes of a number of countries on working conditions and occupational safety and health.

