

POSITION STATEMENT

Managing the Health Impacts of Pollution

May 2005

Background

Some people suffer from adverse health effects when they are exposed to pollutants at levels lower than thresholds determined by expert bodies, such as the *World Health Organization*. Many people may be exposed to pollutants as a result of:

- a past preference for workers and factories to be located close together, mainly for transport reasons
- a tendency for polluting industries to be located in lower socio-economic areas
- land-use planning that did not take into account the health impacts of industrial emissions—for example, insufficient separation distances between what are now recognised as incompatible land uses
- inadequate environmental impact assessment of industrial expansion and urban growth or encroachment
- inadequate legislation and policies for land-use planning and environmental impact assessments (EIA) to allow for cumulative impact and strategic environmental assessment (SEA)
- unnecessarily hasty approval processes so as to achieve desired outcomes.

The extent of health impacts from noise or other environmental hazards is not yet completely understood, particularly at low levels of exposure. Research on these issues involves major population studies that are expensive. Budget limitations do not allow the state government to play a major role in primary research. Instead it relies on the work of the *National Health and Medical Research Council*, overseas studies, and other external sources.

There will, however, continue to be gaps between insufficient and conflicting evidence of adverse health impacts of pollutant exposure and the government's response. Engagement in national approaches and responses to public health policy is one of the most cost-effective means of addressing these gaps.

A health risk assessment or health impact assessment can be used to set standards for pollution exposure that will, in general, protect the community. These assessments consider likely impacts from polluting or potentially polluting activities on MOST people, but cannot do much for conditions that have no known cause—for example, multiple chemical sensitivity.

Similarly, standards for air quality, noise, water quality, food, etc. cannot protect ALL the people ALL the time; when unusual sensitivities arise, they will need to be addressed on a case-by-case basis. There is no such thing as zero risk, which can be difficult for the community to understand.

Management approaches

A mixture of legislation (e.g. *Environment Protection Act 1993* and the *Public and Environment Health Act 1987*), regulation, policy, community and industry behavioural change programs, and cooperation and collaboration are used to manage the adverse effects of human activities on public health.

As legislation involves imposing restrictions or costs on citizens, the definition of health impacts that trigger such an imposition results from a public process that aims to balance the costs to, and interests of, those affected by the outcome. Restrictions need to be reasonable and practicable, as defined in legislation such as the Environment Protection Act. Legislative impositions cannot be easily varied to take into account the circumstances of individual complainants, although the EPA can to some extent take noise characteristics into account when determining acceptable levels. However, this is only where noise impacts are not already subject to an environment protection policy.

For new developments, land use planning, environmental impact assessment and environmental regulation all play a role in protecting the community from health risks. Health risk assessment and health impact assessment are best done early in the decision-making process so that health issues can be considered together with social, economic and environmental objectives. Currently, the SA Department of Health has little or no role in health risk and health impact assessment for new developments. In other states, health departments do consider the health impacts of new developments and this is being considered for South Australia as part of proposed changes to the planning legislation.

EPA approaches

Consultation & complaints service

The pollution complaints and response service is an essential part of environmental protection and decides how, and which agency is best able, to respond to the problem. The community of South Australia plays an important role in assisting the EPA with its environmental 'watchdog' responsibility.

Local government is well placed to manage pollution complaints that result from local or domestic events such as air conditioner noise or wood smoke. The police can also respond to domestic noise complaints, usually those arising from loud music at parties, etc. However, the community must accept some responsibility for resolving problems resulting from domestic or neighbourhood issues before involving the authorities.

This can be achieved by using free, government-operated community mediation services for domestic pollution complaints. Many complaints are a result of neighbour disputes and both parties must be willing to negotiate for this service to be effective. Should community mediation be unsuccessful, then compliance with the law may be enforced, preferably by the local council with EPA support. Failing that, the EPA will take action consistent with its *Guidelines for Compliance and Enforcement*.

For complex, sensitive or high public interest matters, the EPA Board may invite both the community and industry to present to the Board prior to making a decision, as in the case of the Hensley and Castalloy foundries.

Cooperation and collaboration

As a result of the 'Sharing Responsibilities With Local Government' pilot project, changes to the Environment Protection Act have been proposed to enable some councils to voluntarily opt to enforce the *Environment Protection Act 1993* (the Act) in their own right for non-licensed activities. They will receive support from the EPA and be able to recover some of the costs of dealing with contraventions of the Act.

The EPA and the Department of Health have developed a coordinated and integrated approach to identifying and dealing with high-priority risks to health arising from industrial activity. The EPA works with the Department of Health to deal with contaminated sites and EPA staff regularly receive training in risk communication in cooperation with the Department of Health. The Department of Health will receive extra funding to assist with managing site contamination following a government decision to fund a site contamination package.

Community and industry behavioural change programs

Eco-efficiency projects, such as *Greening the Supply Chain* and *cleaner production programs*, identify opportunities for industry to adopt cleaner production processes, resulting in cost savings, less pollution and more efficient use of natural resources. Other examples include the development of a campaign to inform the community of the best way to use wood heaters so as to minimise wood smoke pollution.

Monitoring

As a requirement of the National Environment Protection Measure for Ambient Air Quality, the EPA has a network of ambient air monitoring stations to assess community exposure to six priority air pollutants, namely nitrogen oxides (NO_x), sulphur dioxide (SO₂), ozone, lead, carbon monoxide (CO), and particulate matter (PM₁₀). The EPA can also monitor hot spots or undertake campaigns to assess local air quality and thus provide data for health risk assessments, and guidance for industry environment improvement programs.

The EPA can also require licensees to identify what their emissions are and to model how the pollutants will spread so as to be able to predict ground level concentrations. These can be used to determine the potential risk to the health of

people living in the affected area. When appropriate, the EPA monitors noise at licensed and, under certain circumstances, non-licensed premises, and offers support and training to local councils to measure and manage noise in domestic situations.

Regulation and enforcement

Both prescriptive and performance-based licence conditions are set by the EPA to manage emissions from industry, so as to meet standards in the ambient environment. If appropriate, and particularly in sensitive environments or when the carrying capacity has been, or is close to being, exceeded, industry environment improvement programs are implemented via licence conditions to reduce emissions, and hence risk. In these circumstances, health risk assessment, combined with best practice technology and environmental management, is the minimum starting point.

The Department of Health provides advice on health risk assessments conducted by industry to assist the EPA in deciding on environmental authorisations and development assessments. Environment protection policies, codes and guidelines are important tools for environmental management—e.g. guidelines on separation distances for incompatible land uses.

In making decisions about its major environment protection functions—for example, assessment of development applications and environmental authorisations—the EPA considers the objects of the Environment Protection Act (including sustainability principles), the general environmental duty that applies to everyone, and any environment protection policy that covers the subject under consideration.

In essence, any measure taken to protect, restore or enhance environmental quality must be reasonable and practicable. The measures must have regard to the principles of ecologically sustainable development and consider:

- the financial implications (as they relate to that industry sector)
- the nature of the pollution or potential pollution and sensitivity of the receiving environment
- current technical knowledge and likelihood of success of implementation.

The EPA undertakes enforcement action, consistent with its Compliance and Enforcement guidelines, when there are breaches of the Environment Protection Act, licence conditions or environment protection policies. Enforcement can range from verbal warnings through to prosecution.

Proposed changes to legislation

Proposed changes to environmental legislation will require among other things, industry to consult with the community on their activities. In proposed changes to planning legislation, the Environment and Conservation Portfolio¹ has recommended that health impact assessment should play a much greater role when assessing new developments.

¹ Department of Environment and Heritage; Department for Water, Land and Biodiversity Conservation; Environment Protection Authority

National approaches

The *Environment Protection and Heritage Ministerial Council* (EPHC) collaborates with the health sector to set standards and criteria for air quality, site contamination, water quality, etc. through legislative and non-legislative approaches. The EPHC also has strong representation on other national standard-setting bodies, including the *enHealth Council* and the Land Transport and Environment Council.

A memorandum of understanding between the EPHC, the enHealth Council and the *National Health and Medical Research Council* (NHMRC) is being developed to improve cooperation between the health and environment sectors and provide a high level policy group to examine health-based environment protection issues.

Further work

Work that needs to be done to further improve the management of pollution impacts includes:

- development of EPA Position Statements and guidance for proponents
- development of policies for impact assessment of developments—for example, strategic environmental assessments
- changes to the land-use planning and environmental impact assessment processes and systems to streamline approvals without compromising environmental quality and ecosystem integrity—for example, strategic assessment of plan amendment reports
- expansion of industry and urban sustainability programs, e.g. eco-efficiency
- expanded use of environment management systems (a necessary, but not always sufficient tool for improving environmental performance)
- development of legislative and policy frameworks for the environmental assessment of incremental industrial expansion
- full disclosure of company environmental performance, including community relations
- review of national health-based criteria based on Australian data—for example, the air quality *NEPM*. Furthermore, it is becoming increasingly evident that while the air NEPM provides useful information about the exposure of the general Australian population to certain air pollutants, alternative or complementary approaches need to be explored in order to guide both health impact assessments and health risk assessments of communities exposed to air pollutants, and consequent management and regulatory responses.
- clarification of the roles and responsibilities of local and state governments in environmental protection and response to community complaints
- use of innovative policy tools to encourage continuous improvement in industry's environmental performance—for example, the use of the financial and insurance sectors and supply chains as surrogate regulators.

While much of this work is under way, strong collaborative partnerships will be required between governments, industry and communities to fully implement these

initiatives and identify further opportunities for managing the health impacts of pollution.

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